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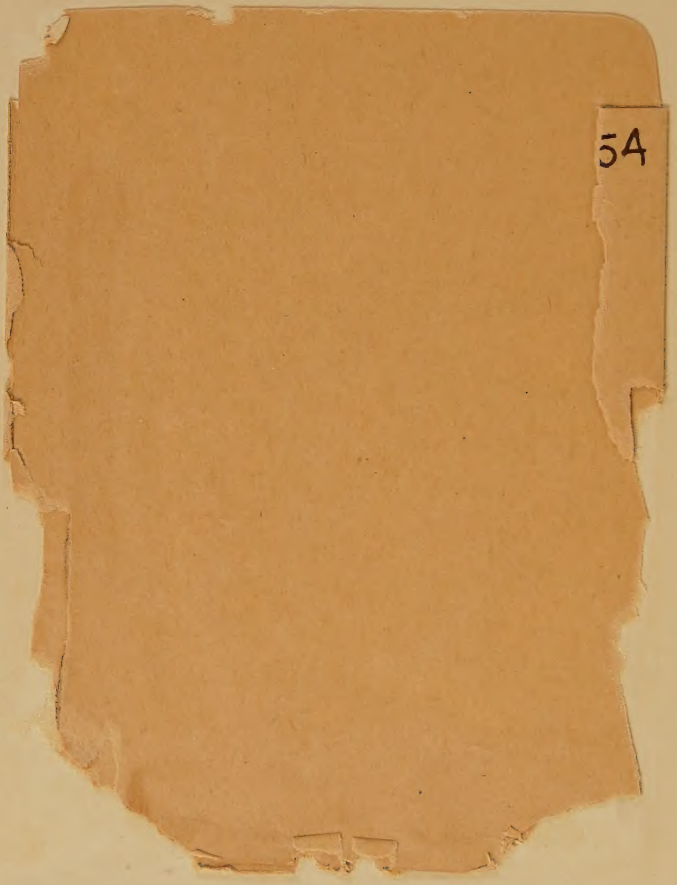
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HOW SCHOOLS USE THEIR TIME

TIME ALLOTMENT PRACTICE IN 444 CITIES INCLUDING A STUDY OF TRENDS FROM 1826 TO 1926

BY
CARLETON HUNTER MANN, PH.D.

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C. H. M.

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HOW SCHOOLS USE THEIR TIME

TIME ALLOTMENT PRACTICE IN 444 CITIES INCLUDING A STUDY OF TRENDS FROM 1826 TO 1926

CHAPTER I

INTRODUCTION

With the broad expansion of the curriculum of the American public schools during the past century, the problem of the time budget has become one of increasing importance, both for the teacher and for the educational administrator. The purposes of this investigation, which has been undertaken in order to discover how schools use their time, are as follows:

1. To determine present practice relative to the amount of time allotted to subjects and activities in elementary schools in communities of all sizes.
2. To discover trends in time allotments by means of a comparison of practice over a period of 100 years.
3. To compare present practice with recommended optimum time allotments for any subjects for which such recommendations are available as the result of research and experimental evidence.

Sources of Data

Time allotment facts which have been used in this study were gathered from the following sources:

1. Time allotment reports received by the Bureau of Elementary Curriculum Research of Teachers College, Columbia University.
2. Printed and mimeographed time allotment schedules.
3. City courses of study and other city school bulletins.
4. State courses of study and bulletins.
5. Annual school reports of cities of the United States from the earliest dates of issue as found in the Teachers College Library and in other libraries, including the New York Public

Library, the Boston Public Library, and those of Columbia and New York Universities.

Time Allotment Data for 1925-26.—The information relative to the time allotments for 1925-26 was chiefly obtained from reports made to the Bureau of Elementary Curriculum Research of Teachers College as a result of a request sent out in March, 1925, to city and county superintendents soliciting their coöperation in this study by reporting the time allotments prevailing in their schools. A copy of the report blank, together with the letter sent to city superintendents, is included as a part of this chapter. These were sent to superintendents of all cities having a population of 2,500 or over as listed in the *Educational Directory* of the United States Bureau of Education for 1925. A similar letter requesting time allotments for rural districts and for communities of less than 2,500 population was sent to all county and district superintendents in the United States as listed in the *Educational Directory*. Each county superintendent was asked to report for one town under his jurisdiction with a population of less than 1,000 and for one typical rural school in his county. As a result of these requests, reports were received from 1,134 school systems. It is interesting to note that replies continued to reach the Research Bureau for more than a year after the time allotment blanks were first mailed out.

The information gained from these reports has been supplemented by printed and mimeographed time allotment schedules and by time allotments reported in courses of study and other city school bulletins, as found in the files of the Bureau of Curriculum Research and on the shelves of Teachers College Library.

Source of Data Showing Time Allotments of Former Years.—In order to study trends in time allotments over a period of years, a search was made through hundreds of old city school reports and courses of study dating back as early as 1800. The information gathered from these original sources has been supplemented by adapting materials reported in the investigations of Payne,[1] covering the year 1904 and of Holmes,[2] based on conditions in 1914.

[1] Payne, Bruce R. *Public Elementary School Curricula.* Silver, Burdett and Co., 1905.

[2] Holmes, Henry W. "Time Distributions by Subjects and Grades in Representative Cities," *National Society for the Study of Education, Fourteenth Yearbook,* Part I, Chapter II, pp. 21-27.

Source of State Time Allotment Data.—Facts as to time allotments recommended by the state educational authorities were secured by searching state courses of study and other state bulletins for the latest recommendations as to time schedules. These included all issues received by the Bureau of Curriculum Research up to September, 1927.

Statistical Treatment

Population Groups.—Previous time allotment studies usually have been limited either to one population group or to one sectional group. For example, the study by Ayer[3] which was reported in 1924, included only cities of over 100,000 population, while that made by Kyte[4] in connection with the California Curriculum Study covered the time allotment practice of teachers of elementary schools in the state of California. Up to the present time no one has been able to say just what the time allotment practice is in cities having a population of between 30,000 and 100,000, or in communities of from 2,500 to 5,000. The same is true of any other population group composed of communities having a population of less than 100,000. As stated in the letter sent out from the Bureau of Elementary Curriculum Research inviting the coöperation of school superintendents, one of the reasons for making this study has been to determine "time allotments in cities and rural districts of all sizes, so that a superintendent in any community may be able to say with more assurance that the amount of time given to arithmetic in the fourth grade in communities of a size equal to his own is so many minutes." With this end in view, in order to discover the time allotment facts for each group of cities in which the administrative problems are relatively similar, the information for 1925-26 was tabulated for communities of various population groups.

The population groups chosen are as follows:

Group I. Cities having a population of 100,000 or over
Group II. Cities having a population of 30,000 to 100,000

[3] Ayer, Fred C. *Time Allotments in the Elementary School Subjects.* United States Bureau of Education, City School Leaflet No. 19, February, 1925. Also in the *Second Yearbook of the Department of Superintendence,* National Education Association, February, 1924, pp. 139-43.

[4] Kyte, George C. *A Study of Time Allotments in the Elementary School Subjects with Special Consideration of California School Systems.* California Curriculum Study, Bulletin No. 1, October, 1925.

Group III. Cities having a population of 10,000 to 30,000
Group IV. Cities having a population of 5,000 to 10,000
Group V. Cities having a population of 2,500 to 5,000
Group VI. Cities having a population of less than 2,500

Statistical Measures Used in Analysis of Time Allotments.—In the present investigation current practice in time allotments has been determined for all subjects and activities offered in grades 1-6 in each of two ways:

First: By finding the average time allotment and percentage of time allotted to each subject in each grade, considering all cities in each population group regardless of whether or not all or only part of the group allotted time to the given subject.

Second: By finding a central tendency and the variability of time allotments for each subject in each half-grade, considering only those cities in each population group which make allotments to a given subject in the half-grade for which the analysis is made.

The first method makes available information needed to determine the relative weights given to the various subjects, and groups of subjects, by each population group and by all population groups combined, and to discover the trends of time allotments over a period of years.

The second method supplies the facts needed by the superintendent or teacher who wishes to compare his own practice in allotting time directly with that of other schools in his own population class. Not all school systems offer the same subjects, nor are the subjects which are common to the curricula of various communities always offered in the same grade. One city may begin a certain subject in the low first grade, another in the high first, while still another may postpone giving the same subject until the child enters the third or even the fourth grade. Since it is of interest to those offering any subject in a given half-grade to know what time allotments other schools which offer the same subject in the same half-grade are making, the data for 1925-26 have been treated according to the second method to show the median time allotments and the range of the middle 50 per cent, as well as the maximum and minimum time allotments for each of twenty-four subjects or activities in each of twelve half-grades, or grade divisions, from the low first to the high sixth grade.

In addition to the analysis of the time distribution for each grade or half-grade, the *total time* devoted to each subject or activity throughout the six grades has been determined, both methods mentioned above being used.

The statistical measures, which have been determined for each of the twenty-four subjects or activities, in each of the six population groups, as reported for 1925-26 are as follows:

1. Average (mean) time allotments for each subject, by grades, considering all schools.
2. Percentage of time allotted to each subject, by grades.
3. Median time allotments, by half-grades, considering only cities reporting time allotted to the specified subjects.
4. Maximum-minimum range of time for each subject, by half-grades.
5. Range of the middle 50 per cent (Q_3-Q_1) as shown by the first and third quartiles of the time distributions for each subject, by half-grades.
6. Total amount of time in minutes per week allotted to each subject in elementary grades 1-6 in terms of all measures of central tendency and dispersion as given in items 1-5 above.

Nature and Extent of the Sampling for 1925-26

Time allotment reports were received from 1,134 school systems. Requests for these reports were sent out to the superintendents of the 2,873 cities of more than 2,500 population, as listed in the *Educational Directory* of the United States Bureau

Population Group	Number Reporting	Number Reporting Length of School Year	Number Used in Study of Time Allotments
100,000 or over	44	37	40
30,000 to 100,000	93	86	74
10,000 to 30,000	175	148	108
5,000 to 10,000	174	158	75
2,500 to 5,000	239	218	96
Less than 2,500	174	167	51
Rural Districts	235	183	..
Total	1134	997	444

of Education for 1925. Of this number, 725, or more than 25 per cent, responded. Similar requests were sent to 3,054 county superintendents for reports on time allotment in rural districts and in communities of less than 2,500; in answer to these requests, 409 replies were received.

Of the total of 1,134 reports received, 1,042 were used either in the study of time allotment, or in a supplementary study of the length of school year and length of school day, or in both. The distribution of the number of communities reporting according to population groups, together with the number included in the study, is shown in the preceding tabulation.

Both the length of the school year and the length of the school day are obviously closely related to the problem of time allotment. As seen from the above table, 997 school systems included in their reports statements as to the length of time the schools are in session annually. An analysis of the length of school year in its relation to the size of the community will be found in Chapter VI.

In the investigation of time allotments the reports from 444 school systems have been used. The analysis of present practice in rural districts has not been included in this study, since the number of usable reports from rural districts was too small to warrant the drawing of any conclusions. The small number of usable rural reports may be accounted for by the fact that in many cases those who filled out the reports for the rural districts apparently included only the recitation time for each subject, or distributed the teacher's time over the work of several grades.

A careful checking of 899 reports received from cities and towns, showed that approximately 50 per cent were made out with sufficient accuracy to be included in the final study. As was the case with the rural schools, many reports could not be used, since recitation time only was reported. A much greater number of reports were rejected, because in checking it was found that the sum of the time allotments by subjects and activities for the several grades failed to balance with the length of the school day or school week reported for the grades in question.

That the 444 communities used in the study are representative of the country at large may be seen from the fact that they include cities from 46 states and the District of Columbia. The

two states not represented are Delaware and New Mexico. This sampling of 444 communities includes approximately 14 per cent of all cities in the United States which have a population of more than 2,500 as listed in the *Educational Directory* for 1925. Of the 46 states which have cities included in this study, 26 are represented by from 10 to 33 per cent of all their communities having a population of 2,500 or more; the average representation for these 26 states is 17 per cent, while the average representation for the remaining states is approximately 5 per cent.

The list of 26 states which are represented by at least 10 per cent of all their communities of 2,500 population or over is as follows:

New Jersey 33%	Michigan 17%	Pennsylvania ... 11%
South Dakota .. 28	Iowa 16	Washington 11
California 26	Connecticut 15	West Virginia .. 11
Arizona 25	Ohio 15	Montana 11
Wisconsin 24	Missouri 14	Maryland 11
New York 23	Illinois 13	Virginia 10
Colorado 22	Minnesota 13	Idaho 10
Massachusetts .. 19	Nebraska 13	Vermont 10
Kansas 18	Wyoming 12	

The states included in this group are well distributed geographically; no one section of the country predominates; the list includes 7 Western states, 6 Eastern states, 6 of the Great Plains group of states, 4 of the Great Lakes group, and 3 of the Southern states.

Definitions of Subjects and Activities

The time allotment blanks sent out by the Bureau of Elementary Curriculum Research provided for the allocation of the pupil's time in each half-grade to any of 24 subjects or activities, including a miscellaneous item. This form, a copy of which may be found at the end of this chapter, provides for a larger number of subjects and activities than are found in previous studies of time allotment, thus permitting a more detailed analysis of time distribution. In order to secure uniformity and accuracy in reporting time allotments, it was of course necessary to define the terms used. A list of definitions of subjects and activities was included as part of the report blank. Those to whom the forms were sent were requested to study the definitions before attempt-

ing to fill out the time allotment schedule. The following instructions bearing upon this point were given:

Before filling the blank, please read entirely through the list of definitions given on the opposite sheet. Then place in each square the number of minutes per week devoted to the subject in each of the half-grades listed at the top of the sheet. Reference to the definitions as you fill in the time for each subject will guarantee more uniformity and accuracy. While many will not agree with these definitions, we know you will see the necessity of providing them even though arbitrarily in order to secure uniformity. Please follow them as closely as possible.

The definitions of the subjects and activities as included in the report form are as follows:

Arithmetic. All work dealing with numbers and measurements including projects which emphasize quantity.

Geography. Include everything that is ordinarily included in the term except material which belongs primarily to the nature study field.

History. Include all history stories, historical biography, and the like, when they are used for their history value.

Language and Grammar. Include all mechanical processes such as oral and written composition, formal grammar, and so forth. Do not include literature or reading.

Penmanship. Include the formal work in penmanship. Do not try to determine the amount of time allotted writing incidentally in other subjects.

Phonics. Indicate here the time allotted to phonics when it is taught in a period separate and apart from the regular reading period.

Reading. Include the mechanical aspects incident to a child's learning to read. Include also phonics in cases where a separate and distinct period is *not* set aside for the teaching of phonics. Do not include literature when it is taught as such. The distinction we draw between literature and reading may make it necessary for you to estimate the approximate number of minutes you spend on the mechanics of learning to read as over against reading for content.

Art and Drawing. Include everything that is ordinarily included in art and art education and drawing except mechanical drawing which comes under manual arts.

Citizenship and Civics. Include thrift, safety first, study of local, state, and national government, and the like. Do not include health education, history, etc.

Handwork. Include paper cutting, primary weaving, etc.

Health Education. Include all health study, physiology, and the like.

Household Arts. Include sewing, cooking, etc.

Literature. Include those stories, poems, and literary selections which are taught strictly from the æsthetic and cultural standpoint.

Manual Arts. Include mechanical drawing, shopwork, such as woodwork, blacksmithing, and the like.

Nature Study. Do not include here material such as "Drainage" which is ordinarily put under the heading of geography.

Opening Exercises. Include such things as opening singing, Scripture reading, salute to the flag, or other activities which are ordinarily not considered as part of the regular subject matter work.

Physical Training. Include setting up exercises, formal drill, etc. Do not include free play and spontaneous exercise.

Projects and Activities. Do not include here time spent on projects which are given in connection with regular subjects. For example, a geography project taught in connection with the geography lesson or in lieu of the geography lesson should not be listed here. List only such time as is regularly devoted to projects that may touch several subjects or such as are given in regular project or activity periods.

Recess. Include the time given to formal periods such as are set aside by the superintendent's or principal's office as regular recess periods. Do not include free and unassigned time here.

Spelling. Include the formal work in spelling. Do not try to determine the amount of time allotted to spelling taught incidentally with other subjects. Do not include phonics.

Supervised Study. Include only such time as is regularly allotted on the schedule under the title of supervised study. Do not include study work which is directly connected with the recitation, e.g., do not include supervised study of geography when this supervised study is given in the geography time as a part of the regular geography period.

Unassigned and Free Time. Include periods that are given over to a child for free expression where no task is assigned but where he may within the room do anything that he may care to do. Include also time that is not assigned to any of the above listed subjects or other periods. Do not include recess or supervised study periods under this heading.

Miscellaneous. Include any time given to any subject not provided for in the above headings.

Where both household arts and manual arts were reported by a school system in the same grade it was generally found that the course in manual arts was provided for the boys and the course in household arts for the girls, and that the two courses were given simultaneously. Therefore in order to prevent duplication of time these have been combined in the tabulations under one heading as household and manual arts.

One subject, social science, has been added to the original list. Although no space was provided for it in the report blank, more than 4 per cent of the schools included in this investigation wrote it in and reported the time given to it.

TEACHERS COLLEGE
COLUMBIA UNIVERSITY
NEW YORK

1925 TIME ALLOTMENT STUDY FOR ALL SUBJECTS IN GRADES KINDERGARTEN TO 6TH INCLUSIVE

BY THE

BUREAU OF ELEMENTARY CURRICULUM RESEARCH

March 12, 1925.

ORGANIZED AND DIRECTED BY
Dean James E. Russell

IN ACTIVE CHARGE OF
Herbert B. Bruner
Florence Stratemeyer

ADVISORY COMMITTEE
Milo B. Hillegas, Chairman
William C. Bagley
Frederick G. Bonser
Patty S. Hill
Henry C. Pearson

GENERAL COMMITTEE
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William H. Kilpatrick
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Lois Coffey Mossman
Annie E. Moore
Henry C. Pearson
Harold O. Rugg
Florence B. Stratemeyer
Clifford B. Upton

My dear Superintendent

In the Second Year Book of the Department of Superintendence, there appeared careful and well-made time allotment studies for cities of 100,000 and over. The Bureau of Elementary Curriculum Research which was organized by Dean Russell July 1st of this school year now proposes to supplement these studies by determining time allotments in cities and rural districts of all sizes so that a superintendent in any community may be able to say with more assurance that the amount of time given to arithmetic in the 4th grade in communities of a size equal to his own is so many minutes. Our studies to date have already shown that some communities allot 42½ times as much time to elementary science as others, 22½ times as much to history, and even in reading where there is the smallest difference 2¼ times as much.

This study will be not only engaging from an academic standpoint but will reveal some differences in practice which will provide a fertile field for further study. Some of these studies this Bureau hopes to attempt.

Will you not therefore have members of your force fill out and check carefully the enclosed time allotment folder and blank which we trust have been arranged so as to make the least possible work for you. First fill in the number of minutes asked for on the second page of the folder. Then copy this information on the single sheet enclosed. Please return the single sheet to us; the folder you may retain for your own files.

Your cooperation will be wholeheartedly appreciated and we assure you that the results will be made available as soon as the tabulations are completed.

Yours very sincerely,

Herbert B. Bruner
Florence Stratemeyer.

FORM I

LETTER ACCOMPANYING TIME ALLOTMENT BLANK

TIME ALLOTMENT BLANK

NAME OF CITY OR DISTRICT: 1920 CENSUS POPULATION
LENGTH OF SCHOOL YEAR IN WEEKS:
SUPERINTENDENT:
INDIVIDUAL REPORTING:
POSITION HELD:

Before filling the blank, please read entirely through the list of definitions given on the opposite sheet. Then place in each square the number of minutes per week devoted to the subject in each of the half grades listed at the top of the sheet. Reference to the definitions as you fill in the time for each subject will guarantee more uniformity and accuracy. While many will not agree with these definitions, we know you will see the necessity of providing them even though arbitrarily in order to secure uniformity. Please follow them as closely as possible.

	Kinder-gar-ten	1		2		3		4		5		6		Total Min. per week all grades
		*L	H	L	H	L	†H	L	H	L	H	L	H	
Arithmetic														
Geography														
History														
Language and Grammar														
Penmanship														
Phonics														
Reading														
Art and Drawing														
Citizenship and Civics														
Handwork														
Health Education														
Household Arts														
Literature														
Manual Arts														
Music														
Nature Study														
Opening Exercises														
Physical Training														
Projects and Activities														
Recess														
Spelling														
Supervised Study														
Unassigned and Free Time														
Miscellaneous														
Total Minutes per week in school for each half grade														

*1—L means the first half of the grade.
†2—H means the second half of the grade.

FORM II

Form Used for Collecting Time Allotment Data

DEFINITIONS

ARITHMETIC. All work dealing with numbers and measurements including projects which emphasize quantity.

GEOGRAPHY. Include everything that is ordinarily included in the term except material which belongs primarily to the nature study field.

HISTORY. Include all history stories, historical biography and the like, when they are used for their history value.

LANGUAGE AND GRAMMAR. Include all mechanical processes such as oral and written composition, formal grammar and so forth. Do not include literature or reading.

PENMANSHIP. Include the formal work in penmanship. Do not try to determine the amount of time allotted writing incidentally in other subjects.

PHONICS. Indicate here the time allotted to phonics when it is taught in a period separate and apart from the regular reading period.

READING. Include the mechanical aspects incident to a child's learning to read. Include also phonics in cases where a separate and distinct period is *not* set aside for the teaching of phonics. Do not include literature when it is taught as such. The distinction we draw between literature and reading may make it necessary for you to estimate the approximate number of minutes you spend on the mechanics of learning to read as over against reading for content.

ART AND DRAWING. Include everything that is ordinarily included in art and art education and drawing except mechanical drawing which comes under manual arts.

CITIZENSHIP AND CIVICS. Include thrift, safety first, study of local, state and national government, and the like. Do not include health education, history, etc.

HANDWORK. Include paper cutting, primary weaving, etc.

HEALTH EDUCATION. Include all health study, physiology, and the like.

HOUSEHOLD ARTS. Include sewing, cooking, etc.

LITERATURE. Include those stories, poems and literary selections which are taught strictly from the aesthetic and cultural standpoint.

MANUAL ARTS. Include mechanical drawing, shopwork, such as woodwork, blacksmithing, and the like.

NATURE STUDY. Do not include here material such as "Drainage" which is ordinarily put under the heading of geography.

OPENING EXERCISES. Include such things as opening singing, Scripture reading, salute to the flag or other activities which are ordinarily not considered as part of the regular subject matter work.

PHYSICAL TRAINING. Include setting up exercises, formal drill, etc. Do not include free play and spontaneous exercise.

PROJECTS AND ACTIVITIES. Do not include here time spent on projects which are given in connection with regular subjects. For example, a geography project taught in connection with the geography lesson or in lieu of the geography lesson should not be listed here. List only such time as is regularly devoted to projects that may touch several subjects or such as are given in regular project or activity periods.

RECESS. Include the time given to formal periods such as are set aside by the superintendent's or principal's office as regular recess periods. Do not include free and unassigned time here.

SPELLING. Include the formal work in spelling. Do not try to determine the amount of time allotted to spelling taught incidentally with other subjects. Do not include phonics.

SUPERVISED STUDY. Include only such time as is regularly allotted on the schedule under the title of supervised study. Do not include study work which is directly connected with the recitation, e. g., do not include supervised study of geography when this supervised study is given in the geography time as a part of the regular geography period.

UNASSIGNED AND FREE TIME. Include periods that are given over to a child for free expression where no task is assigned but where he may within the room do anything that he may care to do. Include also time that is not assigned to any of the above listed subjects or other periods. Do not include recess, or supervised study periods under this heading.

MISCELLANEOUS. Include any time given to any subjects not provided for in the above headings.

FORM III

Definitions Accompanying Time Allotment Blank

CHAPTER II

TRENDS IN TIME ALLOTMENT, 1826-1926

The Curriculum of the First American Public Schools

The demand for education in the early American colonies, which resulted in the establishment of the common schools, was the outgrowth of a predominant religious purpose in the life of the people. It was considered essential according to the Puritan religious belief that all children should learn to read in order that each might gain for himself a personal knowledge and understanding of the Bible. At first instruction was carried on in the homes, but it soon became apparent that voluntary efforts on the part of the people would be insufficient to insure a general education. This led to the passage of the Massachusetts Law of 1642, which required the officers of each town to determine whether the parents and masters were teaching the children "to read and understand the principles of religion and the capital laws of the country." Next came the first law among English-speaking people to require communities to establish and maintain schools. This was the Massachusetts Law of 1647 which ordered:

> That every town having 50 householders should at once appoint a teacher of reading and writing and provide for his wages in such manner as the town might determine.

Thus reading was established as the first and dominant subject of the curriculum of our early public schools. Writing was closely associated with reading from the beginning but received a minor emphasis. Gradually arithmetic was included among the subjects taught until by 1775 the curriculum of the Three R's had been widely accepted and was firmly established as the curriculum of the elementary schools. Spelling was also included in many schools at this date but was considered of minor importance.

By 1800 the curriculum in some cities had expanded to include

grammar. Such was the case in the schools of Providence, Rhode Island, whose entire printed course of study in 1800 reads as follows:

> The principal part of the Instruction will consist in Spelling, Accenting & Reading both Prose and Verse with propriety and accuracy, and a General Knowledge of English Grammar and Composition: Also writing a good hand according to the most approved Rules, and Arithmetic through all the previous Rules, and Vulgar and Decimal Fractions, including Tare and Tret, Fellowship, Exchange, Interest, &c.
>
> The books to be used in carrying on the above Instruction are Alden's Spelling Book, 1st and 2nd part, the Young Ladies' Accidence, by Caleb Bingham, The American Preceptor, Morse's Geography, abridged, the Holy Bible in select portions, and such other Books as shall hereafter be adopted and appointed by the committee. The Book for teaching Arithmetic shall be agreed on by the Masters.
>
> The Scholars shall be put in separate Classes according to their several improvements, each Sex by themselves.

Time Allotments in 1826

By 1826 two subjects, spelling and grammar, had attained places of major importance along with reading, writing, and arithmetic and were considered as integral parts of the curriculum of the Three R's. Some other subjects were beginning to wedge their way into the course of study but were not at the time widely accepted. Geography, for instance, was offered in some schools; and sewing, the first of a long line of so-called "fads and frills," had made its appearance in the curriculum, as witnessed by the now highly prized "samplers" made by the school girls of this and later periods.

In the writer's search through available source materials covering the first third of the nineteenth century, no records of definite time schedules giving the amount of time allotted to each of the various subjects taught in 1826 (or any date within a decade of 1826) were brought to light. However, it is evident that what might be called the standard curriculum of 1826 was given over almost exclusively to the Three R's, and that the typical school day of that date (not including the noon period) was approximately 6 hours in length with a recess of 15 minutes during each of the morning and afternoon sessions. This means that out of a total of 1,800 minutes per week 1,650 minutes were allotted to the study of the Three R's, and 150 minutes per week were given to recess, which in this and similar investiga-

tions is classified as one of the group of "special subjects and activities." From this it is apparent that the typical school of a century ago devoted 91.7 per cent of the time to the Three R's and 8.3 per cent to "special subjects and activities."

Time Allotments in 1845

While no complete time schedules were discovered for 1845, a partial distribution of time by subjects is printed in the *Reports of the Annual Visiting Committees of the Public Schools of the city of Boston*[1] for that year. During half the school day each pupil attended a "Writing School" in which writing and arithmetic were the subjects of instruction, and during the other half-day he was instructed in a "Reading School," or "Grammar School" as it was officially designated in the reports of 1845. No mention of time allotment is included in the report of the Grammar School committee, but in the Report of the Committee on Writing Schools we read that:

> From thirty minutes to one hour each day is devoted to writing by all pupils of each class. In most schools one hour is spent in this way.

and again that:

> . . . One-half the time is given . . . to Writing and Arithmetic, and this without any regard to sex, age or requirements.
>
> The girl at seven and sixteen gives the same time to these studies. From one-half to an hour in each day is devoted to Writing, so that two hours or two hours and a half are set apart for arithmetic during the seven or nine years that the pupils may remain in school. The rules give the masters no discretion in this matter, and the child who studies nothing but oral Arithmetic, and who, in fact, can learn nothing except during the recitation, is compelled to spend two or two and a half hours in this way. The Committee do not doubt that the older pupils may spend this time in the study of Arithmetic profitably, but they believe that with the younger it is not only partially lost, but tends to weary and disgust them.

It is evident from this report that in Boston in 1845 the time allotted to writing varied from 150 to 300 minutes per week, while the time given to arithmetic varied from 600 minutes to 750 minutes per week. In most of the schools 300 minutes

[1] Boston City Document, 26, *Reports of the Annual Visiting Committees of the Public Schools of the City of Boston, 1845.* Boston, J. H. Eastburn, City Printer, 1845. Also printed in full in: Caldwell, Otis W., and Courtis, Stuart A., *Then and Now in Education, 1845-1923.* World Book Co., 1924.

per week were devoted to writing and 600 minutes to arithmetic. Stated in terms of percentage distribution, the Boston schools of 1845 allotted approximately 33 1/3 per cent of school time to arithmetic and 16 2/3 per cent to writing.

Time Allotments in 1856

In order to discover time allotments of the past 100 years, a careful search was made through all available city school reports from the earliest dates of publication. The first complete distribution of time by subjects found among these original source materials is for the school year 1855-56 as printed in the *Report of the Board of Education for the Year 1855-56* of the City of Cleveland,[2] Ohio. This report gives the average "time given daily to instruction in the several branches enumerated, together with the time necessarily spent by the teacher in attending to other matters . . . in each grade of the school."

The facts given in the Cleveland report for 1856 as to average daily time allotments have been converted into minutes per week for each subject and distributed in tabular form in Table 1. This table includes the number of minutes per week given to each subject in each grade, the total time given to the subject in grades 1-6, and the percentage of time allotted to each subject in 1856.

In 1856, as shown by the Cleveland allotments, reading, which is reported in combination with spelling, continues to hold the dominant position in the curriculum. Almost 55 per cent of the entire school time in grades 1-6 is given to these two subjects. In the first and second grades almost three-fourths of a six-hour school day is allotted to reading and spelling.

A comparison of time allotments for arithmetic in Boston in 1845 with time allotments for arithmetic in Cleveland in 1856 shows that this subject had lost much ground when judged by the fact that Boston allotted 33 1/3 per cent of all school time to arithmetic in 1845, while Cleveland gave but 14.1 per cent to it in 1856.

The content subjects in 1856 received 15.7 per cent of the school time, which was divided between geography with 9.2 per cent and "general exercises" or "oral instruction" with 6.5 per

[2] Public Schools, City of Cleveland. *Report of the Board of Education for the Year 1855-56*, pp. 23, 24.

cent. "General exercises" combined what might be called nature study and elementary science with citizenship and civics as indicated in the note of explanation at the foot of Table 1.

TABLE 1

NUMBER OF MINUTES PER WEEK AND PERCENTAGE OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS BY CLEVELAND, OHIO, IN 1855–56

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading and Spelling	1,325	73.6	1,325	73.6	1,100	61.1	1,100	61.1	540	30.0	540	30.0	5,930	54.9
Arithmetic	75	4.2	75	4.2	165	9.2	165	9.2	520	28.9	520	28.9	1,520	14.1
Writing									60	3.3	60	3.3	120	1.1
TOTAL THREE R'S	1,400	77.8	1,400	77.8	1,265	70.3	1,265	70.3	1,120	62.2	1,120	62.2	7,570	70.1
CONTENT SUBJECTS														
Geography	75	4.2	75	4.2	160	8.9	160	8.9	265	14.7	265	14.7	1,000	9.2
Oral Instruction	100	5.5	100	5.5	150	8.3	150	8.3	100	5.6	100	5.6	700	6.5
TOTAL CONTENT	175	9.7	175	9.7	310	17.2	310	17.2	365	20.3	365	20.3	1,700	15.7
SPECIAL SUBJECTS														
Drawing									30	1.7	30	1.7	60	0.6
Music									60	3.3	60	3.3	120	1.1
Recess	150	8.3	150	8.3	150	8.3	150	8.3	150	8.3	150	8.3	900	8.3
Opening Exercises	50	2.8	50	2.8	50	2.8	50	2.8	50	2.8	50	2.8	300	2.8
Calling Roll	25	1.4	25	1.4	25	1.4	25	1.4	25	1.4	25	1.4	150	1.4
TOTAL SPECIAL	225	12.5	225	12.5	225	12.5	225	12.5	315	17.5	315	17.5	1,530	14.2
TOTAL ALL SUBJECTS	1,800	100.0	1,800	100.0	1,800	100.0	1,800	100.0	1,800	100.0	1,800	100.0	10,800	100.0

NOTE: The following explanation of Oral Instruction is found in the Cleveland annual school report for 1855–56:

"'General Exercises' comprise oral instructions upon various subjects, and adapted to the different aged pupils. Lessons in the lower grades of Schools are given upon the Globe, the geometrical solids; mineral specimens are exhibited and their characters and uses explained. A part of the time each day is given to the inculcation of some moral lesson. The social duties are dwelt upon, and the *right* and *wrong* in human action familiarly discussed. Such lessons are very valuable."

The amount of time given to special subjects and activities increased between 1826 and 1856. Music and drawing had been added to the curriculum and received definite time allotments in grades 5 and 6. In each of the fifth and sixth grades 3.3 per cent of the time was given to music and 1.7 per cent to drawing in 1856.

Time Allotments in 1866

For the decade from 1862 to 1872 time allotment schedules were found in the annual school reports of six cities, as follows:

Baltimore, Md.	1862–63
Chicago, Ill.	1866–67
Cincinnati, Ohio	1866–67
Cleveland, Ohio	1869–70
Columbus, Ohio	1871–72
Newport, R. I.	1872–73

For convenience in referring to the average time allotment practice for this ten-year period, the single date 1866 will be used in this report.

It should be noted that the Newport time schedule is really representative of the best educational thought of New England school superintendents of the time. This is shown by the statement of the superintendent of the Newport city schools in his report [3] for 1872-73 which reads as follows:

> As the grading of our schools is perfected the advantage of the system will be more fully reaped. The time seems to be ripe for a remodeling of our course of studies, such as will be more in accord with the present advanced state of the science and art of education and such as will be more consistent with the progressive development of the mind. I present here a program of studies, adopted by the New England school superintendents at their meeting in Boston, February 14, 1873.

This program of studies, which included time allotments to the various subjects by grades, was doubtless used by many New England cities.

The average amounts of time allotted by city school systems in 1866 are reported in Table 2. This table includes the average number of minutes per week given to each subject in each grade, the total time given to each subject in grades 1-6, and the percentage of time given to the various subjects.

A comparison of time allotments in 1866 with those of earlier dates shows a number of striking facts. Reading, while still the most important subject as indicated by the proportion of time given to it, received less than one-fifth of the total time. Reading and spelling combined, which in 1856 were given 55 per cent of the total time, were allotted but 30.9 per cent in 1866.

[3] *Annual Report of the School Committee of the City of Newport, R. I., 1872-73*, p. 24.

A number of new subjects had been added to the curriculum of grades 1-6 by 1866. Time allotments were reported for physical training, object lessons, phonics, history, and natural philosophy. It may be a surprise to any who consider physical education as a recent addition to the elementary curriculum to learn that physical training was offered in all grades in 1866 and received 3.5 per cent of the total time of grades 1-6. Object lessons, which held a place of importance in the curriculum of

TABLE 2

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGES OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS BY 6 CITIES IN 1866

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	387	25.8	393	26.0	338	22.0	236	14.8	250	15.4	199	12.2	1,803	19.2
Phonics	4	.3	4	.3	4	.3							12	.1
Arithmetic	205	13.7	249	16.5	234	15.3	273	17.2	307	18.9	307	18.9	1,575	16.8
Language and Grammar	25	1.7	35	2.3	90	5.9	153	9.6	171	10.5	204	12.6	678	7.2
Penmanship	99	6.6	90	5.9	119	7.7	120	7.5	124	7.6	119	7.3	671	7.1
Spelling	188	12.5	191	12.6	187	12.2	187	11.8	184	11.4	151	9.3	1,088	11.6
TOTAL THREE R'S	908	60.6	962	63.6	972	63.4	969	60.9	1,036	63.8	980	60.3	5,827	62.0
CONTENT SUBJECTS														
Geography	8	.5	8	.5	33	2.1	87	5.4	125	7.7	210	12.9	471	5.0
History							2	.1	2	.1	2	.1	6	.1
Nature Study and Elementary Science							3	.2	3	.2	3	.2	9	.1
Object Lessons	150	10.0	155	10.3	119	7.8	122	7.7	72	4.4	62	3.8	680	7.3
TOTAL CONTENT	158	10.5	163	10.8	152	9.9	214	13.4	202	12.4	277	17.0	1,166	12.5
SPECIAL SUBJECTS														
Art and Drawing	52	3.5	44	2.9	48	3.1	56	3.5	47	2.9	45	2.8	292	3.1
Music	106	7.1	81	5.4	73	4.8	66	4.2	66	4.1	57	3.5	449	4.8
Physical Training	61	4.0	61	4.0	69	4.5	48	3.0	48	2.9	39	2.4	326	3.5
Recess	114	7.6	114	7.5	114	7.4	121	7.6	121	7.4	121	7.4	705	7.5
Opening Exercises	80	5.3	80	5.3	84	5.5	80	5.0	84	5.2	84	5.2	492	5.2
Unassigned and Free Time					17	1.1	17	1.1	8	.5	18	1.1	60	.6
Miscellaneous	21	1.4	8	.5	4	.3	21	1.3	13	.8	4	.3	71	.8
TOTAL SPECIAL	434	28.9	388	25.6	409	26.7	409	25.7	387	23.8	368	22.7	2,395	25.5
TOTAL ALL SUBJECTS	1,500	100.0	1,513	100.0	1,533	100.0	1,592	100.0	1,625	100.0	1,625	100.0	9,388	100.0

this period, received 7.3 per cent of the total time of the elementary grades. The proportion of time given to this new subject varied from 10 per cent in the first grade, to 3.8 per cent in grade 6. Phonics received 25 minutes per week in each of grades 1-3 in the Chicago schools in 1866, while a very small amount of time was allotted to history and natural philosophy in grades 4-6 of the Baltimore schools.

Music and drawing were well established in all grades as judged by time allotments of 1866. Music received 7.1 per cent of the time of the first grade, but the proportion gradually decreased to 3.5 per cent in the sixth grade. Of the total time in grades 1-6 music was given 4.8 per cent. Art and drawing, which had not been so widely accepted as music, received 3.1 per cent of the total time, or about two-thirds as much time as was allotted to music.

Time Allotments in 1904 and 1914

The investigations of time distributions by Payne[4] in 1904 and Holmes[5] in 1914 have been drawn upon for materials to be used in the study of trends in time allotment. Payne's summary tables could not be used in this study because of differences in statistical treatment. However, Payne reported separately the time allotment schedules of each of the ten cities used in his study for 1904. Schedules from six of these cities which were complete enough in detail to be comparable with other schedules used in the present investigation have been tabulated to show the average amounts of time allotted to the several subjects.

The six cities whose schedules were used for this comparison include Chicago, New Orleans, San Francisco, Cleveland, Louisville, and Columbus, Ga. The results of these tabulations are set forth in Table 3.

In 1914 Holmes studied the time allotments of "fifty American cities representing all sections of the country." He reported average time allotments which were computed on the basis of the number of cities offering the subjects and disregarding the others. In order to secure comparable data for a study of trends

[4] Payne, Bruce R. *Public Elementary School Curricula*, Silver, Burdett and Co., 1905.
[5] Holmes, Henry W. "Time Distributions by Subjects and Grades in Representative Cities," *National Society for the Study of Education, Fourteenth Yearbook*, Part I, Chapter II, pp. 21-27.

TABLE 3

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGES OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS BY 6 CITIES IN 1904

(Table constructed from data reported in Payne's study)

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	463	35.2	413	28.9	379	25.3	277	18.2	214	13.6	138	8.9	1,884	21.2
Arithmetic	161	12.2	204	14.3	248	16.6	261	17.2	266	17.0	270	17.4	1,410	15.9
Language and Grammar	163	12.4	185	12.9	190	12.7	173	11.4	227	14.5	260	16.7	1,198	13.5
Penmanship	77	5.9	87	6.1	100	6.7	86	5.6	66	4.2	61	3.9	477	5.4
Spelling	46	3.5	100	7.0	98	6.5	101	6.6	90	5.7	83	5.4	518	5.8
TOTAL THREE R'S	910	69.2	989	69.2	1,015	67.8	898	59.0	863	55.0	812	52.3	5,487	61.8
CONTENT SUBJECTS														
Geography	17	1.3	30	2.1	72	4.9	184	12.1	196	12.5	199	12.8	698	7.9
History	8	.6	8	.5	13	.9	23	1.5	38	2.4	73	4.7	163	1.8
Nature Study and Elementary Science	35	2.7	31	2.2	38	2.5	35	2.3	46	2.9	46	3.0	231	2.6
TOTAL CONTENT	60	4.6	69	4.8	123	8.3	242	15.9	280	17.8	318	20.5	1,092	12.3
SPECIAL SUBJECTS														
Drawing	53	4.0	66	4.6	65	4.3	68	4.5	73	4.6	73	4.7	398	4.5
Music	65	5.0	72	5.0	67	4.5	67	4.4	68	4.3	68	4.4	407	4.6
Household and Manual Arts	17	1.3	21	1.5	22	1.5	26	1.7	20	1.3	20	1.3	126	1.4
Physiology	6	.5	6	.4	8	.5	8	.5	18	1.2	18	1.1	64	.7
Physical Training	42	3.2	42	3.0	42	2.8	42	2.8	42	2.7	33	2.1	243	2.7
Recess	91	6.9	113	7.9	113	7.6	113	7.4	104	6.6	104	6.7	638	7.2
Opening Exercises	38	2.9	33	2.3	33	2.2	33	2.2	33	2.1	33	2.1	203	2.3
Miscellaneous	32	2.4	19	1.3	8	.5	24	1.6	69	4.4	74	4.8	226	2.5
TOTAL SPECIAL	344	26.2	372	26.0	358	23.9	381	25.1	427	27.2	423	27.2	2,305	25.9
TOTAL ALL SUBJECTS	1,314	100.0	1,430	100.0	1,496	100.0	1,521	100.0	1,570	100.0	1,553	100.0	8,884	100.0

in time distribution, the writer has used materials from the Holmes study as a basis for the compilation of a new table showing the average number of minutes per week given to each subject in 1914 when all cities are considered. The averages thus derived for the fifty cities, together with the percentages of time given to the various subjects in each of the elementary grades, are presented in Table 4.

TABLE 4

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGES OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS BY 50 CITIES IN 1914

(Table constructed from data reported in Holmes's study)

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1-6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	412	32.3	364	27.4	291	20.7	237	15.8	195	13.0	181	12.0	1,680	19.7
Arithmetic	71	5.6	149	11.2	203	14.4	231	15.4	223	14.9	226	15.0	1,103	12.9
Language	109	8.5	120	9.0	146	10.3	164	11.0	180	12.0	183	12.1	902	10.6
Penmanship	73	5.7	91	6.9	79	5.6	81	5.4	76	5.0	70	4.6	470	5.5
Spelling	59	4.6	100	7.5	113	8.0	104	6.9	95	6.4	90	6.0	561	6.6
TOTAL THREE R'S	742	56.7	824	62.0	832	59.0	817	54.5	769	51.3	750	49.7	4,716	55.3
CONTENT SUBJECTS														
Geography	3	.2	9	.7	56	4.0	126	8.4	158	10.6	166	11.0	518	6.1
History	11	.9	14	1.1	24	1.7	62	4.2	87	5.8	92	6.1	290	3.4
Science	42	3.3	47	3.5	48	3.4	50	3.3	47	3.1	53	3.5	287	3.4
TOTAL CONTENT	56	4.4	70	5.3	128	9.1	238	15.9	292	19.5	311	20.6	1,095	12.9
SPECIAL SUBJECTS														
Drawing	149	11.7	82	6.2	85	6.0	81	5.4	76	5.1	76	5.0	549	6.5
Music	68	5.3	73	5.5	71	5.0	73	4.9	70	4.7	70	4.7	425	5.0
Industrial Arts	25	2.0	28	2.1	29	2.1	36	2.4	50	3.3	65	4.3	233	2.7
Physical Training	61	4.8	55	4.1	53	3.8	52	3.5	51	3.4	53	3.5	325	3.8
Recess	100	7.8	103	7.8	103	7.3	98	6.5	91	6.1	87	5.8	582	6.8
Opening Exercises	51	4.0	51	3.8	51	3.6	47	3.1	43	2.9	41	2.7	284	3.3
Miscellaneous	42	3.3	43	3.2	57	4.1	57	3.8	56	3.7	56	3.7	311	3.7
TOTAL SPECIAL	496	38.9	435	32.7	449	31.9	444	29.6	437	29.2	448	29.7	2,709	31.8
TOTAL ALL SUBJECTS	1,276	100.0	1,329	100.0	1,409	100.0	1,499	100.0	1,498	100.0	1,509	100.0	8,520	100.0

TIME ALLOTMENTS IN 1926

Time allotment practice in 1926, as stated in Chapter I, has been worked out from tabulations made on two different bases: first, considering all cities in each population group studied and securing the average practice of the entire group; second, considering only those cities in each group which actually allot time to the subject.

Time allotment data arrived at by these two different methods may be widely divergent. Not all cities offer all subjects, and

some cities may offer a certain subject in grades 1-6, while others may limit it to grades 4-6 or 1-4 or any other combina-

TABLE 5

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGES OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS BY 444 CITIES IN 1926

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	388	28.8	348	24.3	293	19.1	212	13.4	168	10.4	149	9.2	1,558	17.1
Phonics	68	5.0	51	3.6	24	1.6	5	0.3	1	0.1	1	0.1	150	1.6
Literature	22	1.6	22	1.5	35	2.3	25	1.6	26	1.6	27	1.7	157	1.7
Arithmetic	80	5.9	146	10.2	196	12.8	211	13.3	215	13.3	215	13.3	1,063	11.6
Language and Grammar	86	6.4	104	7.2	136	8.8	158	10.0	169	10.5	173	10.7	826	9.1
Penmanship	74	5.5	80	5.6	84	5.5	85	5.4	82	5.1	79	4.9	484	5.3
Spelling	31	2.3	82	5.7	94	6.1	96	6.1	93	5.8	89	5.5	485	5.3
TOTAL THREE R'S	749	55.5	833	58.1	862	56.2	792	50.1	754	46.8	733	45.4	4,723	51.7
CONTENT SUBJECTS														
Geography	4	0.3	7	0.5	58	3.8	133	8.4	160	9.9	164	10.2	526	5.8
History	8	0.6	11	0.8	26	1.7	57	3.6	94	5.8	113	7.0	309	3.4
Social Science	2	0.1	3	0.2	3	0.2	5	0.3	6	0.4	6	0.4	25	0.3
Citizenship and Civics	11	0.8	12	0.8	14	0.9	16	1.0	19	1.2	21	1.3	93	1.0
Nature Study and Elementary Science	21	1.6	23	1.6	21	1.4	19	1.2	17	1.0	16	1.0	117	1.3
TOTAL CONTENT	46	3.4	56	3.9	122	8.0	230	14.5	296	18.3	320	19.9	1,070	11.8
SPECIAL SUBJECTS														
Art and Drawing	71	5.3	73	5.1	74	4.8	73	4.6	72	4.5	70	4.3	433	4.7
Music	74	5.5	76	5.3	77	5.0	80	5.1	79	4.9	77	4.8	463	5.1
Household and Manual Arts	2	0.1	2	0.1	3	0.2	6	0.4	18	1.1	30	1.8	61	0.7
Hand Work	30	2.2	22	1.5	13	0.8	9	0.6	6	0.4	5	0.3	85	0.9
Projects and Activities	8	0.6	6	0.4	6	0.4	5	0.3	4	0.2	2	0.1	31	0.3
Health Education	30	2.2	31	2.2	37	2.4	44	2.8	51	3.2	52	3.2	245	2.7
Physical Training	79	5.9	79	5.5	81	5.3	81	5.1	80	5.0	80	5.0	480	5.3
Recess	111	8.2	112	7.8	109	7.1	103	6.5	97	6.0	92	5.7	624	6.8
Opening Exercises	51	3.8	53	3.7	52	3.4	49	3.1	48	3.0	47	2.9	300	3.3
Supervised Study	18	1.3	24	1.7	31	2.0	44	2.8	49	3.0	52	3.2	218	2.4
Unassigned and Free Time	49	3.6	43	3.0	42	2.7	39	2.5	37	2.3	33	2.0	243	2.7
Miscellaneous	29	2.2	25	1.7	26	1.7	26	1.6	22	1.4	22	1.4	150	1.6
TOTAL SPECIAL	552	40.9	546	38.0	551	35.8	559	35.4	563	35.0	562	34.7	3,333	36.5
TOTAL ALL SUBJECTS	1,347	99.8	1,435	100.0	1,535	100.0	1,581	100.0	1,613	100.1	1,615	100.0	9,126	100.0

tion of grades. Citizenship and civics may be used to illustrate this divergence. The average time given by 40 cities of 100,000 population or over to citizenship and civics in the first grade is 11 minutes per week. However, out of the 40 cities only 11 allot time in the first grade to this subject. The median practice of the 11 cities is to allow 45 minutes per week for citizenship and civics in grade 1. The second method supplies the facts which superintendents and teachers must have in order to compare their own allotments in a given subject in a given grade with the practice of other schools of their population class which allot time to the same subject in the same grade. The first method makes available information needed to determine the relative weights given to the various subjects or combinations of subjects by the several population groups and the relative weights given at different periods of time, from which trends of time allotment usage may be ascertained.

In Table 5 appear the average amounts of time in minutes per week and the percentage of time given to each subject in each grade by 444 cities in 1926. This table has been compiled according to the first method just mentioned, and, for comparative purposes, represents average practice in the United States at this time. Time allotment facts arrived at by use of the second method appear in another section of this report.

Comparative Ranking of Subjects in 1866, 1904, 1914, and 1926

The facts relative to the total time allotted to the various subjects and the percentage of total time given to each subject in grades 1-6, which have been reported above in the respective tables for the years 1866, 1904, 1914, and 1926, have been brought together for purposes of comparison in four parallel columns in Table 6. In addition to the average practice of 444 cities in 1926, the average recommendations or prescriptions of 15 states for the same date have been taken from Table 8 in Chapter III and placed in a fifth column so that present-day practice and theory may be compared. The subjects are arranged in the first column according to their ranks in 1866 as determined by the amount of time given to each subject. In the column for each year will be found the number of minutes per week given to each subject, the percentage of time, and the relative rank

for that year. Subjects not included in the curricula of 1866 have been placed at the end of the list in order of rank in 1926.

As shown in Table 6, some important changes have taken place in the 60 years between 1866 and 1926. Reading and arithmetic have continued to hold undisputed possession of the first and second places respectively in time allotments during this period, although the time given to arithmetic has decreased by approximately one-third. In 1866 arithmetic received 1,575 minutes, or 16.8 per cent of the total time, in grades 1-6 as compared with 1,063 minutes, or 11.6 per cent, received in 1926. Spelling suffered the greatest losses of any of the fundamental subjects, dropping from third place in 1866, when it received 1,088 minutes, to sixth place in 1926, when it averaged 485 minutes, or to tenth place in 1926, if the state recommendations are considered. In practice, spelling now receives but 45 per cent of the time allotted to it in 1866, and if the average recommendation of the states were followed, it would receive but 39 per cent of the allotment given 60 years ago. Penmanship, while retaining the same relative rank, now receives but 484 minutes, as compared with 671 minutes in 1866. Language instruction has gained in importance over the period, rising in rank from sixth to third place.

The greatest gain over this period has been made by history. In 1866 history was considered a study too advanced for grades 1-6, as shown by the fact that but one of the six cities studied allotted time to it in grades below the seventh. In 1926 the average amount of time given to history in the elementary grades was 309 minutes, as compared with 6 minutes given in 1866, while the average recommendation of the 15 states is that 439 minutes be given to this subject.

Among the other content subjects geography also made some gains between 1866 and 1926. The percentage of time allotted to geography increased from 5 per cent to 7.9 per cent in 1904 and then decreased to 5.8 per cent in 1926. "Object lessons," which received 7.3 per cent of the total elementary time in the decade between 1862 and 1872 and which occupied fifth place in the list of studies and activities, has disappeared from the curriculum. For purposes of comparison, "object lessons" which included a large amount of elementary science material might be tabulated along with "natural philosophy," which was also

TABLE 6

COMPARATIVE RANKS OF THE ELEMENTARY SUBJECTS IN 1866, 1904, 1914, AND 1926 AS DETERMINED BY THE PERCENTAGE OF TIME AND THE AVERAGE AMOUNT OF TIME ALLOTTED TO EACH SUBJECT IN GRADES 1–6

Subjects	1866			1904			1914			(444 Cities) 1926			(15 States) 1926		
	Min. per Week	Per Cent	Rank	Min. per Week	Per Cent	Rank	Min. per Week	Per Cent	Rank	Min. per Week	Per Cent	Rank	Min. per Week	Per Cent	Rank
Reading (*a*)	1,815	19.3	1	1,884	21.2	1	1,680	19.7	1	1,865	20.4	1	1,804	19.5	1
Arithmetic	1,575	16.8	2	1,410	15.9	2	1,103	12.9	2	1,063	11.6	2	933	10.1	2
Spelling	1,088	11.6	3	518	5.8	6	561	6.6	5	485	5.3	6	428	4.6	10
Recess	705	7.5	4	638	7.2	5	582	6.8	4	624	6.8	4	721	7.8	4
Object Lessons (*b*)	680	7.3	5	—	—	—	—	—	—	—	—	—	—	—	—
Language and Grammar	678	7.2	6	1,198	13.5	3	902	10.6	3	826	9.1	3	900	9.7	3
Penmanship	671	7.1	7	477	5.4	7	470	5.5	8	484	5.3	7	465	5.0	8
Opening Exercises	492	5.2	8	203	2.3	12	284	3.3	14	300	3.3	12	284	3.1	13
Geography	471	5.0	9	698	7.9	4	518	6.1	7	526	5.8	5	532	5.8	6
Music	449	4.8	10	407	4.6	8	425	5.0	9	463	5.1	9	477	5.2	7
Physical Training	326	3.5	11	243	2.7	10	325	3.8	10	480	5.3	8	407	4.4	11
Art and Drawing	292	3.1	12	398	4.5	9	549	6.4	6	433	4.7	10	605	6.6	5
Miscellaneous	71	0.8	13	—	—	—	311	3.7	11	150	1.6	16	125	1.3	17
Unassigned and Free Time	60	0.6	14	—	—	—	—	—	—	243	2.7	14	291	3.2	12
Nature Study and Elem. Science	(*c*) 9	0.1	15	231	2.6	11	287	3.4	13	117	1.3	17	207	2.2	16
History	6	0.1	16	163	1.8	13	290	3.4	12	309	3.4	11	439	4.8	9
Health Education	—	—	—	(*d*) 64	0.7	15	(*e*)	—	—	245	2.7	13	273	3.0	14
Supervised Study	—	—	—	—	—	—	—	—	—	218	2.4	15	—	—	—
Citizenship and Civics	—	—	—	—	—	—	—	—	—	93	1.0	18	92	1.0	18
Handwork (*f*)	—	—	—	—	—	—	—	—	—	85	0.9	19	—	—	—
Household and Manual Arts (*f*)	—	—	—	126	1.4	14	233	2.7	15	61	0.7	20	249	2.7	15
Projects and Activities	—	—	—	—	—	—	—	—	—	31	0.3	21	—	—	—
Social Science	—	—	—	—	—	—	—	—	—	25	0.3	22	—	—	—
Total	9,388	100.0		8,884	100.0		8,520	100.0		9,126	100.0		9,238	100.0	

(*a*) Reading here includes phonics and literature in order to make data comparable over the entire period.
(*b*) Includes much elementary science material as well as moral instruction.
(*c*) "Natural Philosophy" offered in 1866.
(*d*) Physiology.
(*e*) Physiology and hygiene were included under "science" in Holmes's study for 1926.
(*f*) Handwork and manual arts, which are given separately in the analysis for 1926, were combined in Holmes's study for 1914. For purposes of comparison the allotments given separately for 1926 should be combined.

offered in 1866, under the heading of nature study and elementary science. If this is done, the amount of time given to nature study and elementary science in grades 1-6 in 1866 is several times greater than the amount given in 1926, notwithstanding the fact that 1926 prides itself as belonging to the scientific age.

Among the special subjects and activities the place of music has remained practically constant during this sixty-year period. Art and drawing, on the other hand, has made large gains from 292 minutes allotted in 1866 to 433 minutes received in 1926; but present practice is far short of the 605 minutes recommended by the 15 states.

Manual and household arts did not appear in the elementary curriculum of 1866, and according to Payne's study they were "found in no program in 1888," at least as far as the cities which he studied were concerned. By 1904 these activities were receiving 126 minutes. In the Holmes study for 1914 manual training, which included handwork, received 233 minutes. In the present investigation for 1926 handwork and manual arts, which have been separated in order to make possible a more detailed analysis, are found to receive 85 and 61 minutes respectively, or when combined for purposes of comparison with former studies, 146 minutes. This is one-third less than the allotment in 1914. Furthermore, the average time allotment recommended for manual arts by the 15 states is 70 per cent greater than the amount of time actually given by the schools in 1926. An examination of data given in a later chapter, which reports time allotments by cities grouped according to size, will show that time allotted to manual activities is much less in cities of each population group in 1926 than was allotted in the 50 cities studied by Holmes in 1914. The least amount of time is given by cities having a population of from 10,000 to 30,000 and the most time by cities of from 30,000 to 100,000.

Physical training, which in 1866 received 326 minutes, had dropped to 243 minutes in 1904, but in the next 10 years regained lost ground. The period from 1914 to 1926 has seen a great increase in the attention given to this activity. During the last 12 years the amount of time allotted to physical training has increased from 325 minutes, or 3.8 per cent, to 480 minutes, or 5.3 per cent of the total time. In this activity the city prac-

tice exceeds the state recommendations. Health education, which along with physical training has also made great gains, was not found in the curricula in 1866. In 1904 physiology, which has been tabulated under the head of health education, received

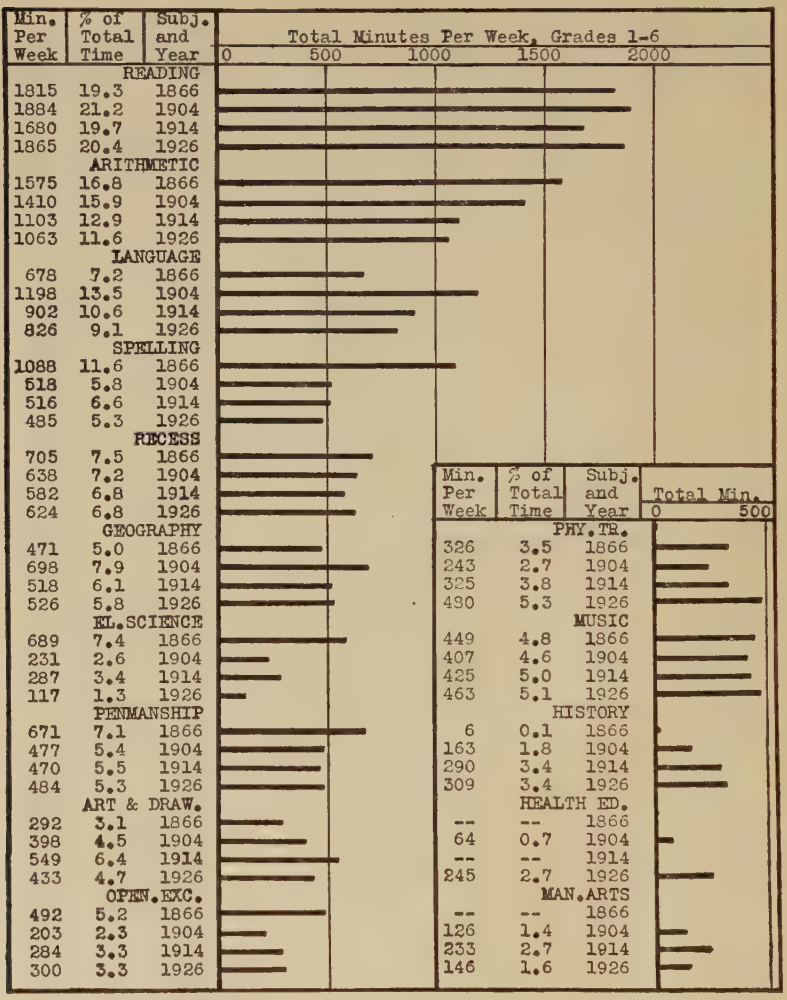

CHART 1

TRENDS IN TIME ALLOTMENTS 1866–1926 AS SHOWN BY THE PERCENTAGE OF TOTAL TIME AND TOTAL NUMBER OF MINUTES PER WEEK IN GRADES 1–6 ALLOTTED TO CERTAIN SUBJECTS

64 minutes per week. Time allotments to health education in 1914 are not available, since physiology and hygiene were tabulated under "science" in the Holmes study. By 1926 emphasis on health education had so increased that in 444 cities an average of 245 minutes was allotted to the subject. Health education and physical training combined now receives 8 per cent of the total time, as compared with 3.4 per cent in 1904, and 3.5 per cent in 1866.

A graphic representation of changes and trends in time allotments from 1866 to 1926 for the several subjects is given in Chart 1.

Trends in Subject Time Allotments by Grades as Shown by Time Distribution Curves for 1866, 1904, 1914, and 1926

It is of interest to note the changes in time allotment practice for each subject, grade by grade, over a period of years. This can be done by a detailed study of the time allotment facts reported in Tables 1 to 5 of this chapter, but such a comparison can be made more conveniently by means of a series of time distribution curves which are simply graphic representations of the comparative amounts of time distributed, grade by grade, for each subject for each of the years under consideration. Such a series of curves covering the years 1866, 1904, 1914, and 1926 has been prepared for each of the following subjects and activities: reading, arithmetic, language, penmanship, spelling, geography, history, nature study or elementary science, music, art and drawing, physical training, household and manual arts, opening exercises, and recess. These graphic comparisons are exhibited in Charts 2 and 3.

It is evident from an examination of the time distribution curves shown in Charts 2 and 3, that a number of subjects have characteristic curves, the forms of which have remained practically unchanged from 1866 to 1926, even though the total amount of time allotted to a given subject may have increased or decreased during this period. In the case of some subjects, on the other hand, decided changes in the characteristics of time distribution curves have taken place during the last 60 years. History and spelling are good examples of this group. The tendency has been to push history lower and lower into the grades and at the same time greatly to increase time allotments

to the subject in the upper grades. The spelling curves for 1904, 1914, and 1926 parallel each other closely and fall far below the 1866 curve on the chart. The forms of the 1866 and the 1926

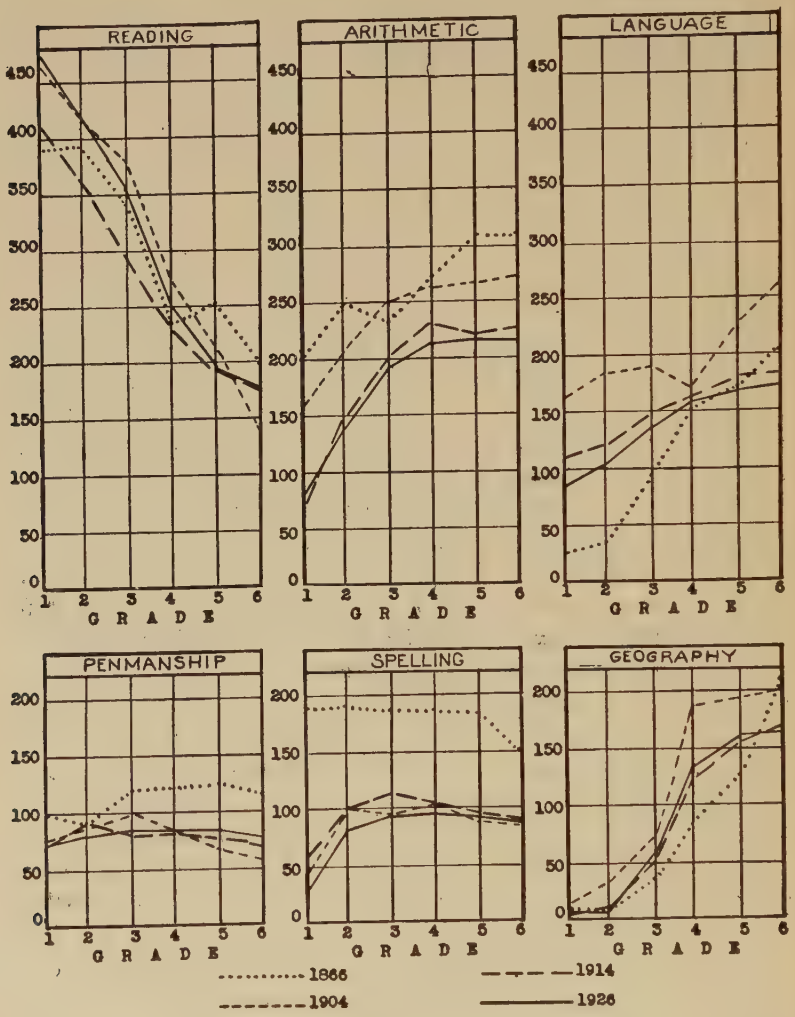

CHART 2

Comparison of Time Distribution Curves for the Years 1866, 1904, 1914, and 1926 Showing the Average Number of Minutes per Week Allotted in Each Grade for Reading, Arithmetic, Language, Penmanship, Spelling, and Geography

spelling curves differ widely on account of the tendency to eliminate formal instruction in spelling from the first grade studies, or when not eliminated to decrease greatly the time given to it. The average amount of time allotted to spelling in

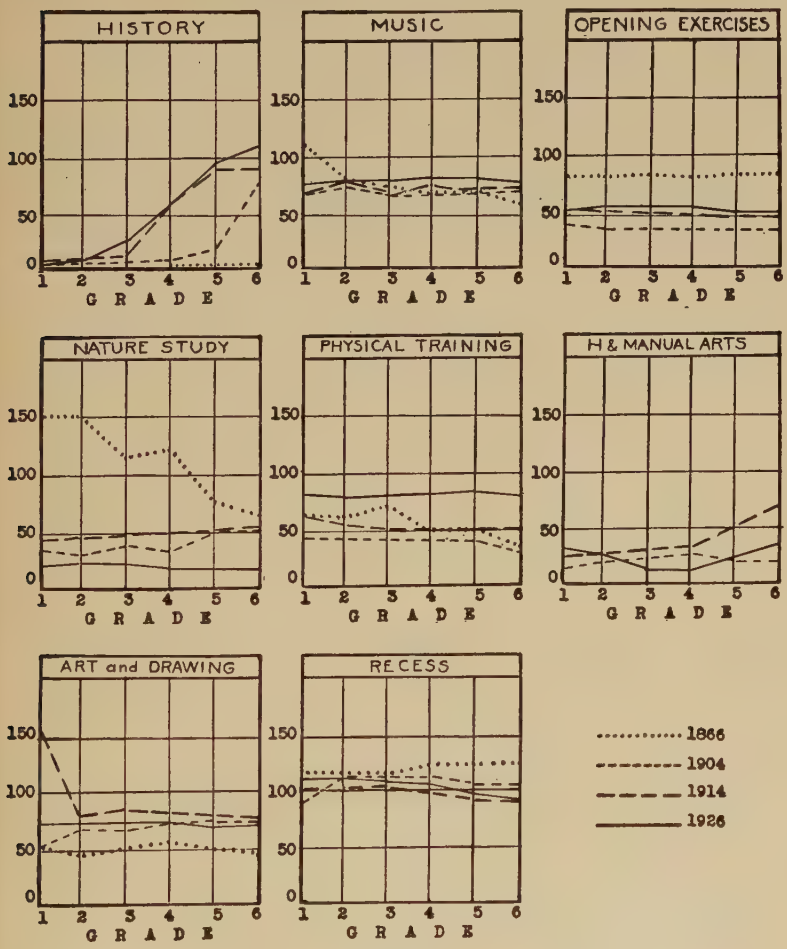

CHART 3

Comparison of Time Distribution Curves for the Years 1866, 1904, 1914, and 1926 Showing the Average Number of Minutes per Week Allotted in Each Grade for History, Music, Opening Exercises, Nature Study or Elementary Science, Physical Training, Household and Manual Arts, Art and Drawing, and Recess

grade 1 in 1866 was six times as great as in 1926, and in the other grades approximately twice as much time was given to spelling 60 years ago as now.

The points of similarity and difference, of constancy and change from year to year are so obviously revealed in the graphic representations of the charts that a detailed discussion of these points for each subject is unnecessary. A study of the causes underlying the various distinctive types of time-curves, such as those of music, geography, reading, or arithmetic, each of which has its own peculiar characteristics, should be a profitable one, but such a study is beyond the province of this investigation.

CHAPTER III

TIME ALLOTMENTS RECOMMENDED BY STATE AUTHORITIES

Do the state departments of education recommend or prescribe time allotment schedules? If so, how does the current time allotment practice in the 444 cities studied compare with the distribution of time as recommended by the state educational authorities? In order to answer these questions, a careful search was made through all the recently issued state courses of study and other state educational bulletins available, either on the shelves of the Teachers College Library or in the files of the Bureau of Elementary Curriculum Research, for the latest recommendations as to time schedules made by the educational officers of the 48 states and the territory of Alaska. The materials surveyed in this connection included all courses of study and other bulletins which had been received prior to September, 1927. Courses of study were available from 42 states.

State courses of study and teachers' manuals are the chief means by which the state departments of education can hope to exert a direct day-by-day influence upon the organization of classroom instruction as carried on by the individual teacher. Each year thousands of new teachers, the majority of whom go into rural and village schools, enter the schoolroom for the first time with little or no knowledge of how to budget either their own or their pupils' time. Their first big problem is that of time allotment and program making. How much time should be given to this or that subject in order to secure a well-balanced program in the particular grade or grades in which she is to teach is a perplexing question confronting every inexperienced teacher. In what direction can she turn for aid? Logically, it might be expected that every course of study issued by the state educational authorities would contain a recommended time allotment schedule, which would serve as a guide to the teacher in

budgeting the time of her school. This might well be supplemented by suggestive daily programs based upon the time schedule. Assistance is not always available in this quarter, however, and so she is forced to turn elsewhere. Perhaps she finds the program of her predecessor; if so, the chances are that it will be adopted, whether good or bad. This is, in fact, a rather common method of program making. The need for a more scientific procedure is apparent.

The importance which some state departments attach to a definite time allotment schedule and to the daily program which is based upon it may be illustrated by the following quotation from the Pennsylvania Course of Study:

Time Allotment

The following table gives the approximate number of minutes to be devoted to each of the different activities in the several grades. The allotment is based upon the six-hour school day designated in the school law. The time assigned to the different subjects includes that used for both recitation and study. On the whole, it is best to assign definitely all the available time. Some teachers, however, prefer to have a period of unassigned time which may be used in a variety of ways where it will serve to the best advantage. The best time for this period is not at the very end of the school day.

A flexible time schedule is useful in schoolroom practice. It provides a means for checking up the time pupils give to the several subjects and thereby keeps the work of the school day fairly well balanced. In arranging a daily program of recitation and study, teachers should generally follow this time schedule.

Program of Work

In the arrangement of the program it is necessary to see that pupils have definite study assignments as well as assignments for recitation purposes.

The program that is arranged should be followed generally. There is no single thing that will upset the classroom work so much as omitting classes for a day, or getting behind with the schedule and having to make shifts to the following day when the pupils have had their work prepared for a regular period.

Surprising as it may seem, time allotment schedules were found in less than one-third of the state courses of study. From all sources at hand, including courses of study and various bulletins, time schedules were found for 14 states and the territory of Alaska. In some cases sample daily programs accompanied the schedules. Sixteen of the remaining states failed to

give time allotment schedules but printed one or more sample daily teacher programs, usually arranged for the rural teacher who is responsible for the teaching of all or at least several of the grades. These programs were, in effect, distributions of the teacher's time and failed to include a complete distribution of the pupils' time; consequently they could not be included in the tabulations of this study. The courses of study of 12 states ignore the problem of time distribution entirely; they offer neither time allotment schedules nor daily programs. Whether or not the remaining 6 states recommend definite time allotment schedules, could not be determined since their courses of study were not available.

The states[1] for which definite time schedules were found include the following:

Maine	Louisiana	Colorado
New Hampshire	North Carolina	New Mexico
Vermont	Minnesota	Utah
New Jersey	Kansas	Wyoming
Pennsylvania	Arkansas	Alaska

This list represents a fair cross-section of the United States, including as it does states from all sections of our country.

Subjects and Activities to Which States Allot Time

Tabulations showing the number of states recommending time allotments to the various subjects in the several grades have been made in order to determine the extent of agreement among state departments of education concerning the subjects which should be offered in the curriculum of the elementary school, and also the extent of agreement relative to the grade placement of these subjects as measured by their time allotment recommendations. The number and the percentage of this group of 15 states which recommend time allotments for the several subjects and activities have been given for each of grades 1-6 in Table 7.

Among the 15 states whose time allotment schedules were analyzed and reported in Table 7, there is unanimous agreement that eight subjects should be included in the curriculum of the elementary schools; these subjects are: reading, writing,

[1] Hereafter no distinction will be made between the states and the territory of Alaska. For the sake of brevity this group will be referred to as the states.

arithmetic, spelling, language, geography, history, and music. However, in the case of but three of the eight subjects is there unanimous agreement as to grade placement; all of the 15 states allot time in each of grades 1-6 to reading, language, and music. Arithmetic falls outside of this 100 per cent group by a narrow margin, since one state does not recommend time for arithmetic

TABLE 7

NUMBER AND PERCENTAGE OF STATES (OF A GROUP OF 15) RECOMMENDING TIME ALLOTMENTS TO VARIOUS SUBJECTS IN THE SEVERAL GRADES, 1926

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		In Any Grade	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Reading	15	100	15	100	15	100	15	100	15	100	15	100	15	100
Phonics	4	27	3	20	3	20	3	20	2	13	2	13	4	27
Literature	1	7	1	7	1	7	1	7	1	7	1	7	1	7
Arithmetic	14	93	15	100	15	100	15	100	15	100	15	100	15	100
Language and Grammar	15	100	15	100	15	100	15	100	15	100	15	100	15	100
Penmanship	13	87	15	100	15	100	15	100	15	100	15	100	15	100
Spelling	6	40	13	87	15	100	15	100	15	100	15	100	15	100
Geography	6	40	6	40	11	73	15	100	15	100	15	100	15	100
History	8	53	8	53	10	67	14	93	15	100	15	100	15	100
Citizenship and Civics	4	27	4	27	4	27	4	27	4	27	6	40	7	47
Nature Study and Elem. Sci.	10	67	10	67	9	60	9	60	9	60	9	60	11	73
Art and Drawing	14	93	14	93	14	93	14	93	14	93	14	93	14	93
Music	15	100	15	100	15	100	15	100	15	100	15	100	15	100
Household and Manual Arts	5	33	5	33	5	33	5	33	8	53	8	53	8	53
Health Education	12	80	12	80	13	87	14	93	13	87	13	87	14	93
Physical Training	13	87	13	87	13	87	13	87	13	87	13	87	13	87
Recess	14	93	14	93	14	93	14	93	14	93	14	93	14	93
Opening Exercises	12	80	12	80	12	80	12	80	11	73	11	73	12	80
Unassigned and Free Time	6	40	6	40	8	53	9	60	9	60	9	60	9	60
Miscellaneous	4	27	3	20	3	20	2	13	2	13	3	20	4	27

in the first grade. Two states do not allot time to penmanship in the first grade, but, as in the case of arithmetic, all agree that it should be offered in grades 2-6. All states recommend time allotments for spelling in grades 3-6, for geography in grades 4-6, and for history in grades 5 and 6.

In addition to the eight subjects which are unanimously accepted as part of the elementary curriculum by the 15 states, three subjects or activities, health education, physical training, and art and drawing, are widely recognized by the state educational authorities as having an important place in the curriculum.

Of this group 93 per cent allot time to art and drawing, 93 per cent to health education, and 87 per cent to physical training.

A comparison of the percentage of states recommending time allotments to the various subjects in each grade with the percentage of 444 cities which offer these subjects in the respective grades (see Table 11) reveals that there is a greater degree of agreement among the states as to what subjects should be offered and the grade placement of these subjects than among the cities. One hundred per cent agreement is obtained among the cities for but two subjects, arithmetic in grades 3, 4, and 5, and language in grade 5. At least 98 per cent of the 444 cities allot time to arithmetic in grades 2-6, to language in grades 3-6, to reading in grades 1-4, to penmanship in grades 2-6, and to spelling in grades 3-6.

Average Time Allotments Recommended by 15 States

The average amounts of time recommended in the time allotment schedules of 15 states for the subjects in each grade are exhibited in Table 8. Included in this table will be found the percentage of time in each grade which is recommended for the several subjects, as well as the percentage of total time in grades 1-6. A comparison of the facts presented in this table with corresponding facts for 444 cities, as set forth in Table 5, shows some striking differences (as well as many points of marked similarity) between average time allotments recommended by the states and average time allotted by the cities. Many of these have been pointed out elsewhere in this study.

In average practice the cities included in this investigation give somewhat more time to the Three R's and somewhat less time to content and special subjects than is recommended by the states. The average recommendation for the Three R's by the educational authorities of 15 states is 48.9 per cent of the total time in grades 1-6, as compared with an average of 51.7 per cent allotted by 444 cities. The states recommend 13.8 per cent of the total time for content subjects, as against 11.8 per cent given by the cities, or approximately one-fifth more time for the content group than is allotted in practice by the cities.

Considering specific subjects, there is a wide gap between recommendation and practice in the case of elementary science or nature study, household and manual arts, history, and art and

drawing. The states recommend approximately 77 per cent more time for elementary science or nature study than is given by the cities, 70 per cent more time for household and manual arts (including "handwork"), 50 per cent more time for history, and 40 per cent more time for art and drawing. The states allow 15

TABLE 8

AVERAGE AMOUNTS OF TIME PER WEEK AND PERCENTAGES OF TIME IN EACH GRADE RECOMMENDED FOR THE ELEMENTARY SUBJECTS BY 15 STATES IN 1926

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	382	28.2	367	26.1	317	20.1	259	16.1	194	11.8	179	10.8	1,698	18.4
Phonics	18	1.3	15	1.1	13	.8	8	.5	7	.4	7	.4	68	.7
Literature	4	.3	4	.3	5	.3	5	.3	10	.6	10	.6	38	.4
Arithmetic	67	4.9	105	7.5	179	11.4	186	11.6	198	12.0	198	12.0	933	10.1
Language and Grammar	126	9.3	127	9.0	149	9.5	158	9.8	166	10.1	174	10.5	900	9.7
Penmanship	62	4.6	75	5.3	79	5.0	84	5.2	83	5.1	82	5.0	465	5.0
Spelling	27	2.0	65	4.6	87	5.5	88	5.5	81	4.9	80	4.8	428	4.6
TOTAL THREE R'S	686	50.6	758	53.9	829	52.6	788	49.0	739	44.9	730	44.1	4,530	48.9
CONTENT SUBJECTS														
Geography	14	1.0	14	1.0	59	3.8	115	7.1	164	10.0	166	10.1	532	5.8
History	24	1.8	24	1.7	45	2.9	80	5.0	140	8.5	132	8.0	445	4.8
Citizenship and Civics	12	.9	12	.9	14	.9	14	.9	15	.9	25	1.5	92	1.0
Nature Study and Elem. Sci.	39	2.9	43	3.1	35	2.2	30	1.9	30	1.8	30	1.8	207	2.2
TOTAL CONTENT	89	6.6	93	6.7	153	9.8	239	14.9	349	21.2	353	21.4	1,276	13.8
SPECIAL SUBJECTS														
Art and Drawing	113	8.3	107	7.6	115	7.3	104	6.5	81	4.9	85	5.2	605	6.6
Music	76	5.6	82	5.8	80	5.1	80	5.0	80	4.9	79	4.8	477	5.2
Household and Manual Arts	35	2.6	36	2.6	35	2.2	36	2.2	53	3.2	54	3.3	249	2.7
Health Education	36	2.7	36	2.6	44	2.8	53	3.3	50	3.0	54	3.3	273	3.0
Physical Training	77	5.7	73	5.2	69	4.4	68	4.2	63	3.8	57	3.5	407	4.4
Recess	121	8.9	120	8.5	124	7.9	120	7.5	119	7.2	117	7.1	721	7.8
Opening Exercises	48	3.5	48	3.4	48	3.0	48	3.0	46	2.8	46	2.8	284	3.1
Unassigned and Free Time	35	2.6	29	2.1	53	3.4	59	3.7	56	3.4	59	3.6	291	3.2
Miscellaneous	39	2.9	23	1.6	24	1.5	12	.7	12	.7	15	.9	125	1.3
TOTAL SPECIAL	580	42.8	554	39.4	592	37.6	580	36.1	560	33.9	566	34.5	3,432	37.3
TOTAL ALL SUBJECTS	1,355	100.0	1,405	100.0	1,574	100.0	1,607	100.0	1,648	100.0	1,649	100.0	9,238	100.0

per cent more time than the cities for recess and 11 per cent more time for health education.

On the other hand, the cities allot more time than the states recommend for physical training, arithmetic, and spelling. The city allotments are 18 per cent greater than the state allotments for physical training, 14 per cent greater for arithmetic, and 13 per cent greater for spelling. Specific time allotments for phonics and for literature, as distinct from reading allotments, are several times greater in the city schedules than in state recommendations.

Range in Length of School Day Recommended by 15 States

The total amount of time available for allotment throughout the elementary course in grades 1-6, as indicated by state-recommended time schedules, is 27 per cent greater in some states than in others. The minimum and maximum daily time allotments by grades taken from a tabulation of 15 state schedules are as follows:

Grade	Minimum No. of Min.	Maximum No. of Min.	Difference In No. of Min.	Difference In Per Cent
1	235	330	95	40
2	235	330	95	40
3	270	360	90	33
4	285	360	75	26
5	300	360	60	20
6	300	360	60	20

A glance at the above table shows that the lower the grade, the greater the variation of the length of the school day. In some states a child in the first and second grades has a school day 40 per cent greater than in other states, while in the fifth and sixth grades the difference between the minimum and maximum school day is but 20 per cent. A corresponding condition of greater variability of length of school day in the lower grades is shown in the study of the length of school day in 444 cities (see Chapter VI). The range between minimum and maximum day is found to be much greater in all grades in the practice of the cities than in the recommendations set up by the states. For example, the minimum school day reported for the sixth grade by 444 cities

is 240 minutes, as compared with a maximum of 420 minutes. This is a difference of 180 minutes, which is three times as great as the difference between minimum and maximum length of day for the sixth grade as recommended by the states. Here, again, we find marked discrepancies between state recommendations and actual practice in the school systems of the country.

CHAPTER IV

CHANGING EMPHASIS RELATIVE TO THE THREE R's, THE CONTENT SUBJECTS, AND THE SPECIAL SUBJECTS, 1826-1926

The subjects and activities of the elementary curriculum are often classified as belonging to one of three major groups which have been designated as (1) the Three R's, (2) the content subjects, and (3) the special subjects or activities. The Three R's are now considered to include the five tool subjects: reading, writing, arithmetic, language, and spelling. To the group of content subjects belong geography, history, citizenship and civics, social science, and nature study or elementary science. These first two general groups combined have been referred to at times as the fundamental subjects. The third general group, known as special subjects and activities, and often condemned as so-called "fads and frills," includes art and drawing, music, household and manual arts, handwork, health education, physical training, recess, opening exercises, projects and activities, supervised study, unassigned and free time, and miscellaneous subjects.

Variation in Percentage of Total Time Given to the Three R's, the Content, and the Special Subjects

It is the purpose of this chapter to discover the changes which have taken place in the relative proportion of time allotted to these three groups of subjects during the century from 1826 to 1926. This comparison has been presented graphically in Chart 4, which exhibits the percentages of total time in elementary grades given to the Three R's, the content subjects, and the special subjects, in 1826, 1856, 1866, 1904, 1914, and 1926. It should be noted that two sets of values are given for 1926; the first of these is based on the average practice in 444 cities, while the second represents the average recommendations of the educational authorities of 15 states. Although the values for 1856 are

drawn from the time allotment practice of the only city (Cleveland, Ohio) whose time allotment schedule was found for that date, they may be considered as representative of the practice of other cities at that time.

It is strikingly evident from the facts presented in Chart 4 that the relative amount of time allotted to the Three R's has decreased continuously during the past 100 years, from 91.7 per

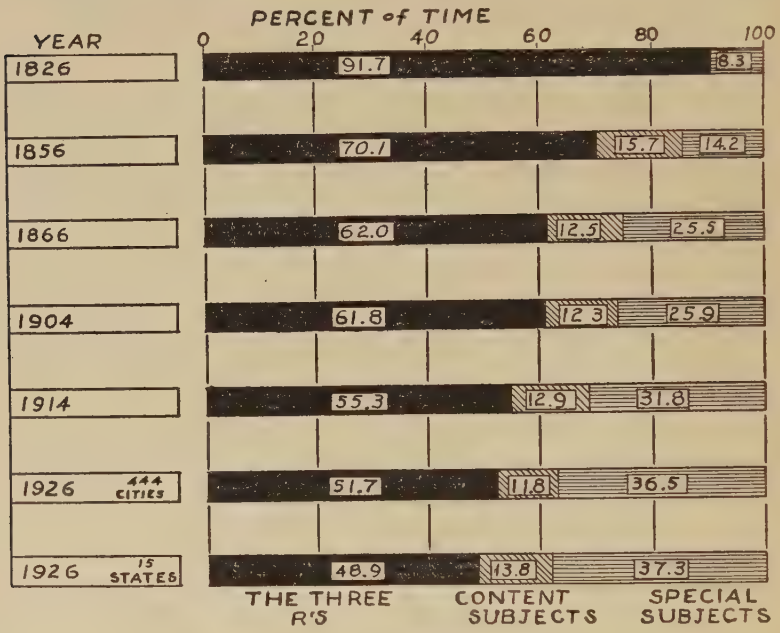

CHART 4

CHANGES IN PERCENTAGES OF TOTAL TIME IN GRADES 1–6 ALLOTTED TO THE THREE R'S, THE CONTENT SUBJECTS, AND THE SPECIAL SUBJECTS 1826–1926

cent of the total time spent in the elementary grades in 1826, to 51.7 per cent in 1926. However, it is important to note that three-fourths of this decrease took place in the 40 years between 1826 and 1866, while but one-fourth of the decrease is the result of changes made in the 60 years between 1866 and 1926. These facts are evidently contrary to the current opinion of many lay critics of the special activities in the schools who have labored under the impression that the curriculum of the elementary

schools previous to the beginning of the twentieth century was almost exclusively given over to the pursuit of the Three R's.

The decrease in the percentage of time allotted to the Three R's was, of course, accompanied by a corresponding increase in the time given to either the content or the special subjects. Although the special subjects and activities increased from 8.3 per cent in 1826, to 36.5 per cent in 1926, the greatest part of this increase occurred before 1866. By 1866 one-fourth of all the time was given to subjects belonging to this special group, which is about the same proportion as was given to the special subjects in 1904. This period from 1904 to 1926 has witnessed an increase in percentage of school time given to the special subjects and activities from 25.6 to 36.5 per cent.

The content subjects had not become established as part of the accepted elementary curriculum in 1826, although some schools offered geography in the upper grades, but by the middle of the nineteenth century this group of subjects occupied an important place in the curriculum. Almost one-sixth of the time was given to the content subjects in 1856. From 1866 to 1926 the relative amount of time given to the content group has remained nearly constant, at approximately 12 per cent of the total time.

It is interesting to note that during the past 100 years there appear to have been two periods of active change in the proportion of time given to the three major groups of subjects, and one period during which the relative division of time remained practically constant. The 40 years from 1826 to 1866 represents a period of extensive readjustment of the curriculum from the standpoint of time allotments as indicated by changes in percentages of time given to the Three R's, the content, and special subjects. That the period from 1866 to 1904 was evidently one of comparative stability is indicated by the fact that practically no changes in the percentages of time devoted to the three groups of subjects occurred during the period. However, this should not be taken to mean that there were no changes within the respective groups during these years. Quite the contrary is true. The period from 1904 to 1926 has been one of renewed activity in redistribution of time allotments but does not represent as extensive changes as the first period from 1826 to 1866.

A comparison of the two bars on the chart which represent the practice of 444 cities in 1926 and the recommendations of 15

states for the same year indicates that there is a tendency for the states to recommend less time than the cities are giving to the Three R's and more time to both the content and special subjects. While the cities actually allot 51.7 per cent of the total time to the Three R's, the states recommend but 48.9 per cent. On the other hand, the states would increase the 11.8 per cent of time given to the content subjects by the cities to 13.8 per cent and the 36.5 per cent given to the special subjects to 37.3 per cent.

Distribution of Time to the Three Major Groups of Subjects, by Grades, 1856-1926

Table 9 has been constructed to show the relation of the distribution of time to the Three R's, the content subjects, and the special subjects, grade by grade. Both the number of minutes per week and the percentage of time given to each of the three groups in each grade have been presented for the following years: 1856, 1866, 1904, 1914, and 1926. For 1926 both the average practice of 444 cities and the average recommendations of 15 states have been given. The trends in time allotment from 1866 to 1926 for the three groups of subjects in the several grades are shown graphically in Chart 5.

It is obvious from the data given in Table 9 and shown graphically in Chart 5 that in all grades throughout the period under consideration the largest amount of time has been given to the Three R's, the next largest to the special subjects and activities, and the least amount to the content group.

It is further evident from Chart 5 that each of the three groups of subjects has characteristic time distribution curves, the forms of which have not varied greatly during the past quarter of a century, although increasing or decreasing time allotments over this period have resulted in a shifting of the positions of the curves upward or downward on the chart. The curves for 1866, however, differ radically from the types of curves which are characteristic of the three groups of subjects for the more recent years.

The time distribution curve for the Three R's for 1866 shows a distribution of about the same proportion of time in each of grades 1-6. The curves for 1904, 1914, and 1926, on the other hand, show comparatively large amounts of time given to this group in the first three grades and relatively smaller amounts in

grades 4-6. Between 1866 and 1904 there was a marked increase in time allotted to the Three R's in grades 1-3 and as great a decrease in grades 4-6. Since 1904 the trend has been to decrease the proportion of time given to the Three R's in all grades. In grades 1-3 the greatest part of this decrease came between 1904

TABLE 9

COMPARISON OF AMOUNTS AND PERCENTAGES OF TIME ALLOTTED TO THE THREE R'S, THE CONTENT SUBJECTS, AND THE SPECIAL SUBJECTS IN 1856, 1866, 1904, 1914, AND 1926

Year	Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
		Min. per Wk.	Per Cent	Min. per Wk.	Per Cent	Min. per Wk.	Per Cent	Min. per Wk.	Per Cent	Min. per Wk.	Per Cent	Min. per Wk.	Per Cent	Min. per Week	Per Cent
1926 (444 Cities)	Three R's	749	55.5	833	58.1	862	56.2	792	50.1	754	46.8	733	45.4	4,723	51.7
	Content ..	46	3.4	56	3.9	122	8.0	230	14.5	296	18.3	320	19.9	1,070	11.8
	Special ...	552	40.9	546	38.0	551	35.8	559	35.4	563	35.0	562	34.7	3,333	36.5
	Total	1,347	99.8	1,435	100.0	1,535	100.0	1,581	100.0	1,613	100.1	1.615	100.0	9,126	100.0
1914	Three R's	724	56.7	824	62.0	832	59.0	817	54.5	769	51.3	750	49.7	4,716	55.3
	Content ..	56	4.4	70	5.3	128	9.1	238	15.9	292	19.5	311	20.6	1,095	12.9
	Special ...	496	38.9	435	32.7	449	31.9	444	29.6	437	29.2	448	29.7	2,709	31.8
	Total	1,276	100.0	1,329	100.0	1,409	100.0	1,499	100.0	1,498	100.0	1,509	100.0	8,520	100.0
1904	Three R's	910	69.2	989	69.2	1,015	67.8	898	59.0	863	55.0	812	52.3	5,487	61.8
	Content ..	60	4.6	69	4.8	123	8.3	242	15.9	280	17.8	318	20.5	1,092	12.3
	Special ...	344	26.2	372	26.0	358	23.9	381	25.1	427	27.2	423	27.2	2,305	25.9
	Total	1,314	100.0	1,430	100.0	1,496	100.0	1,521	100.0	1,570	100.0	1,553	100.0	8,884	100.0
1866	Three R's	908	60.6	962	63.6	972	63.4	969	60.9	1,036	63.8	980	60.3	5,827	62.0
	Content ..	158	10.5	163	10.8	152	9.9	214	13.4	202	12.4	277	17.0	1,166	12.5
	Special ...	434	28.9	388	25.6	409	26.7	409	25.7	387	23.8	368	22.7	2,395	25.5
	Total	1,500	100.0	1,513	100.0	1,533	100.0	1,592	100.0	1,625	100.0	1,625	100.0	9,388	100.0
1856 (Cleveland)	Three R's	1,400	77.8	1,400	77.8	1,265	70.3	1,265	70.3	1,120	62.2	1,120	62.2	7,570	70.1
	Content ..	175	9.7	175	9.7	310	17.2	310	17.2	365	20.3	365	20.3	1,700	15.7
	Special ...	225	12.5	225	12.5	225	12.5	225	12.5	315	17.5	315	17.5	1,530	14.2
	Total	1,800	100.0	1,800	100.0	1,800	100.0	1,800	100.0	1,800	100.0	1,800	100.0	10,800	100.0
1926 (15 States)	Three R's	686	50.6	758	53.9	829	52.6	788	49.0	739	44.9	730	44.1	4,530	48.9
	Content ..	89	6.6	93	6.7	153	9.8	239	14.9	349	21.2	353	21.4	1,276	13.8
	Special ...	580	42.8	554	39.4	592	37.6	580	36.1	560	33.9	566	34.5	3,432	37.3
	Total	1,355	100.0	1,405	100.0	1,574	100.0	1,607	100.0	1,648	100.0	1,649	100.0	9,238	100.0

and 1914. In grades 5 and 6 the decrease from 1914 to 1926 was somewhat greater than that from 1904 to 1914. The greatest percentage of time now given to the Three R's is in the second grade and the least is in the sixth grade.

The form of the time distribution curve for the content subjects is almost the reverse of that for the Three R's. Only a small percentage of time is now given to the content group in grades 1 and 2. From grade 2 the time-curve rises sharply to grade 5 and continues to its highest point at grade 6. Since

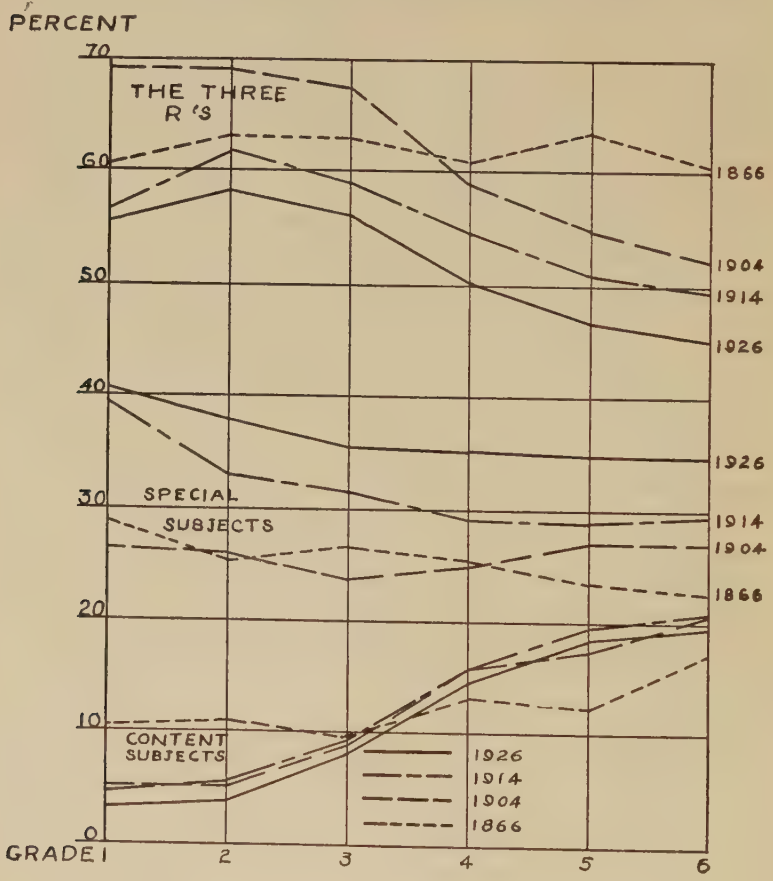

CHART 5

Distribution of Time to the Three R's, the Content Subjects, and the Special Subjects in Each Elementary Grade, 1866–1926

1904 the curves for the content group have remained almost identical in form with but slight changes in the percentage of time allotted in any grade. The curve for 1866 intersects the three curves for 1904, 1914, and 1926 at the third grade, showing that but little change has taken place in the percentage of time given to the content group in grade 3 during the past 60 years. In grades 1 and 2, however, the present practice is to give much less time and in grades 4 to 6 to give much more time to the content subjects than was given in 1866.

The form of the special subjects' time-curve for 1926 shows that the greatest percentage of time is given to the special subjects in grade 1 and the least in grade 6. The slope of the curve is gradual from grade 1 to 3 and barely noticeable from grades 3 to 6. Although the time-curves for the special subjects in 1866 and 1904 intersect at three places, showing irregularity of trends during the earlier part of the period, by 1914 the present type of time distribution curve for the special subjects and activities had been approximated. A larger percentage of time was given to the special subjects in grades 1, 3, and 4 and a smaller percentage to the special subjects in grades 2, 5, and 6 in 1866 than was given in 1904. In 1866, as in 1914 and 1926, the greatest emphasis on the special subjects was in grade 1, while in 1904 the greatest emphasis was given in grade 6. In general, the tendency since 1866 has been to increase the percentage of time given to the special subjects in every grade. The greatest increases for grades 1-3 were made between 1904 and 1914, while the greatest increases for grades 4-6 occurred between 1914 and 1926.

A comparison of the distribution of time to the three groups of subjects in Cleveland, Ohio, in 1856, with the averages for 6 cities in 1866 shows marked differences in all groups in almost every grade. Much more time was given to the content subjects in grades 3-6, and a much greater emphasis was placed on the Three R's in grades 1-4, in 1856 than in 1866. In contrast to this, much more time was given to the special subjects in all grades in 1866 than in 1856.

Some striking differences will be found in making a comparison of practice in 444 cities in 1926 with recommendations by 15 states for the same date. The recommendations of the states show less time for the Three R's in all grades. In the first grade

the states advise 50.6 per cent, as compared to 55.5 per cent given by 444 cities. The difference between recommendation and practice decreases from grade to grade until it is about 1 per cent in grade 6. More time is recommended by the state authorities for the special subjects in grades 1-4 and slightly less time in grades 5 and 6 than is given by the cities. For the content subjects the states recommend that a greater percentage of time be given in all grades. In the first grade, for example, the average recommendation of the states for the content subjects is 6.6 per cent, as compared to 3.4 per cent given by the cities.

Have the Three R's Lost or Gained Ground?

On the face of the facts which have been pointed out in this chapter, it might appear that the Three R's have suffered extensively as the result of the reduction in the percentage of time allotted to them in the past century, and that the critics of the schools might be right in saying that the special subjects, or the so-called "fads and frills," are rapidly replacing the standard Three R's, or tool subjects. Although the Three R's are now receiving a smaller percentage of the time of the elementary schools than ever before, it does not necessarily follow that the pupils of our schools receive less instruction in these subjects now than in the past. The length of the school year is an important factor which must be considered before any conclusion in this matter can be reached. Statistics showing the average length of school year are not available for 1826, but evidence seems to indicate that the schools are in session twice as long in 1926 as they were in 1826. In the first abstract of the Massachusetts Board of Education for 1837, it is reported that "one-third of the children of school age were not in school and probably one-half of the towns of the commonwealth did not hold their schools in session more than four or five months." In contrast to this are the facts found in this study and reported in Chapter VI which show that the average length of school year in 997 cities in 1926 was 37 weeks, or 9.25 school months. Such a difference in length of school year would more than compensate for the decreasing percentage of time given to the Three R's, or tool subjects. Further evidence in support of this claim is found in the statistics of the United States Bureau of Education, reported in Chapter VI, which show that the length of the

school term has increased 30 per cent from 1880 to 1925. This 30 per cent increase in number of days that schools were in session per year from 1880 to 1925 would, of course, more than offset the decrease from 62 per cent of the total time given to the Three R's in 1866, to 51 per cent in 1926.

Furthermore, it may not be out of place to call attention to the fact that the increasing length of school life per person in the United States has more than counterbalanced a decreasing percentage of time given to the Three R's. According to the estimates of the Bureau of Education the average number of days of schooling per person who had just passed the regular period of schooling, at the dates given, was as follows:

Year	Average No. of Days of Schooling
1800	82
1826	163*
1840	208
1850	450
1860	434
1866	523*
1870	582
1880	690
1890	770
1900	934
1910	1,080
1916	1,192
1926	1,360

* Writer's estimate made by interpolation.

If these estimates of average number of days of schooling be accepted, it is an easy matter to arrive at the average number of hours of instruction in the Three R's received by the pupils of our schools at the several dates by using the following factors: (1) the average number of days of schooling, (2) the average length of school day, and (3) the percentage of time given to the Three R's. This has been done in the table on the following page.

From this table it is apparent that in 1926 the children of the nation received more than twice as many hours of instruction in the Three R's as they did in 1866 and almost four times that which they received in 1826.

Date	Average No. of Days of Schooling	Average No. of Hours per School Day, Elementary Grades	Total No. of Hours of Schooling	Per Cent of Time Given to Three R's	Average No. of Hours Instruction in Three R's
1826	163	6.25	1,019	91.7	934
1866	523	5.22	2,730	62.0	1,693
1926	1,360	5.07	6,895	51.7	3,565

In spite of the fact that the percentage of time given to the Three R's has decreased from 91.7 per cent in 1826 to 51.7 per cent in 1926, the evidence indicates that the pupils of our schools receive more hours of instruction in the Three R's than ever before: first, because the greatly increased length of school year has more than counterbalanced the decreased percentage of time given to the Three R's; second, because of the enormous increase in the average number of days of schooling received by each pupil between 1826 and 1926.

CHAPTER V

ELEMENTARY SUBJECT TIME ALLOTMENTS IN 444 SCHOOL SYSTEMS IN RELATION TO SIZE OF CITY, 1926

Subjects Commonly Accepted as Part of the Elementary Curriculum by the Various Population Groups

What are the subjects which are widely accepted throughout the United States as belonging to the curriculum of the elementary schools? Are these subjects the same for all population groups, or are there differences which appear in some way to be dependent upon the size of the city? In order to answer these questions the number of cities allotting time to each subject in some one or more grades has been determined for the several population groups and for all groups combined. From these data the percentage of cities in each group offering the several subjects has been computed. Both the number and percentage of cities in each group which allot time to the various subjects are given in Table 10.

The core of the elementary school program of subjects and activities in the United States in 1926, as determined by an arbitrary standard of time allotments by at least 90 per cent of the 444 cities included in this investigation, consists of the following: arithmetic, language, penmanship, reading, spelling, geography, music, art and drawing, history, opening exercises, and recess. If the bars were let down as low as 88 per cent, health education would also be included. All other subjects and activities fall far below these limits. As shown in Table 10, three subjects, arithmetic, language, and penmanship, are offered in all of the 444 cities. Reading and spelling were included in the schedules of more than 99 per cent of the cities. One city of the 444 did not report any time allotted to reading, and three cities did not schedule spelling. The Three R's are evidently still solidly entrenched as part of the curriculum of the ele-

mentary grades. Geography is offered in 98 per cent of the cities; music, in 96.6 per cent; art and drawing, in 96.4 per cent; and history, in 94.1 per cent. Approximately nine-tenths of the cities include health education, and a slightly larger proportion offer physical training. Opening exercises and recess receive time allotments in approximately 92 per cent of the cities.

Among the other subjects and activities included in the time allotment schedules of 444 cities, none is accepted by as large a proportion as 75 per cent. Nature study or elementary science is reported by two-thirds of the school systems, and surprising

TABLE 10

NUMBER AND PERCENTAGE OF CITIES ALLOTTING TIME TO EACH SUBJECT IN ONE OR MORE ELEMENTARY GRADES IN 1926

BY POPULATION GROUPS

Subjects	Population Group													
	444 Cities All Groups		100,000 and over		30,000-100,000		10,000-30,000		5,000-10,000		2,500-5,000		Less than 2,500	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Reading	443	99.8	40	100.0	73	98.6	108	100.0	75	100.0	96	100.0	51	100.0
Phonics	318	71.6	13	32.5	46	62.2	79	73.1	55	73.3	77	80.2	48	94.1
Literature	203	45.7	12	30.0	25	33.8	43	39.8	45	60.0	53	55.2	25	49.0
Arithmetic	444	100.0	40	100.0	74	100.0	108	100.0	75	100.0	96	100.0	51	100.0
Language and Grammar	444	100.0	40	100.0	74	100.0	108	100.0	75	100.0	96	100.0	51	100.0
Penmanship	444	100.0	40	100.0	74	100.0	108	100.0	75	100.0	96	100.0	51	100.0
Spelling	441	99.3	40	100.0	73	98.6	107	99.1	74	98.7	96	100.0	51	100.0
Geography	435	98.0	39	97.5	71	95.9	105	97.2	75	100.0	94	97.9	51	100.0
History	418	94.1	36	90.0	67	90.5	99	91.7	73	97.3	92	95.8	51	100.0
Social Science	20	4.5	2	5.0	8	10.8	7	6.5	1	1.3	2	2.1	0	0.0
Citizenship and Civics	233	52.5	14	35.0	31	41.9	57	52.8	42	56.0	61	63.5	28	54.9
Nature Study and Elem. Science	296	66.7	28	70.0	41	55.4	66	61.1	54	72.0	72	75.0	35	68.6
Art and Drawing	428	96.4	40	100.0	72	97.3	106	98.1	72	96.0	92	95.8	46	90.2
Music	429	96.6	40	100.0	73	98.6	108	100.0	75	100.0	91	94.8	42	82.4
Household and Manual Arts	156	35.1	29	72.5	40	54.1	38	35.2	21	28.0	24	25.0	4	7.8
Handwork	198	44.6	11	27.5	26	35.1	35	32.4	38	50.7	55	57.3	33	64.7
Projects and Activities	62	14.0	4	10.0	10	13.5	18	16.7	10	13.3	11	11.5	9	17.6
Health Education	394	88.7	30	75.0	63	85.1	93	86.1	66	88.0	95	99.0	47	92.2
Physical Training	403	90.8	38	95.0	69	93.2	101	93.5	68	90.7	86	89.6	41	80.4
Recess	407	91.7	36	90.0	63	85.1	95	88.0	73	97.3	92	95.8	48	94.1
Opening Exercises	409	92.1	33	82.5	61	82.4	100	92.6	73	97.3	91	94.8	51	100.0
Supervised Study	175	39.4	4	10.0	16	21.6	35	32.4	28	37.3	52	54.2	40	78.4
Unassigned and Free Time	266	59.8	21	52.5	46	62.2	59	54.6	51	68.0	56	58.3	33	64.7
Miscellaneous	231	52.0	15	37.5	35	47.3	51	47.2	36	48.0	56	58.3	38	74.5

as it may seem, citizenship and civics receives definite time allotment in but 52.5 per cent of all cities. Household and manual arts are found in scarcely more than a third of the cities studied, while handwork is given in 44.6 per cent of the schedules. Literature is reported by 45.7 per cent of the entire group, and phonics receives a definite time allotment and is taught at a time separate from the reading period in 71.6 per cent of the cities. Unassigned and free time is available for use of the pupils in approximately three-fifths of all school systems. Time allotments for projects and activities are reported by only 14 per cent of the cities and social science by but 4.5 per cent.

The greatest agreement concerning what subjects should be included in the curriculum of the elementary school, as indicated by the standard of 100 per cent of the group allotting time to the subject, is found among the communities of less than 2,500 population, and the next greatest agreement is among cities of 100,000 or over. All communities of less than 2,500 allot time to 8 subjects or activities: reading, arithmetic, language, penmanship, spelling, geography, history, and opening exercises. All cities of 100,000 or over allot time to 7 subjects and activities: reading, arithmetic, language, penmanship, spelling, art and drawing, and music.

The least agreement is found among cities of 30,000 to 100,000 population. This group has 100 per cent agreement in the case of but three subjects: arithmetic, language, and penmanship.

The size of the population group has a very definite relation to the percentage of cities allotting time to certain subjects. One of the most outstanding examples of this is found in the case of household and manual arts. The percentage of communities offering these special subjects varies directly as the size of the population group; the larger the population group, the greater the percentage of cities which offer household and manual arts. The percentage allotting time to household and manual arts decreases from 72.5 per cent for cities of 100,000 or over, to 7.8 per cent for communities of less than 2,500 population. In the case of handwork the relation is reversed: the smaller the community, the greater the percentage of school systems which allot time to handwork.

Physical training and health education are also examples of

the relation of size of city to the percentage of cities offering certain subjects. Physical training receives time allotments in 95 per cent of the cities of 100,000 or over, and in but 80.4 per cent of the smallest population group. Health education, on the other hand, is reported as part of the elementary curriculum of but 75 per cent of the largest cities and in 99 per cent of cities of 2,500 to 5,000 population. In general, the larger the population group, the smaller the percentage of cities allotting time to health education and the greater the percentage allotting time to physical training.

Citizenship and civics should also be mentioned in this connection. Citizenship and civics receives definite time allotments in but 35 per cent of the cities of the largest population group. The percentage increases steadily as the communities become smaller until the maximum is reached in cities of from 2,500 to 5,000 population, in which 63.5 per cent of the group allot time to citizenship and civics in the elementary school.

Art and drawing, and music are almost universally included in the curriculum of the larger cities. Of the two subjects music receives less attention in the smaller communities. Time is allotted to music in 82.4 per cent of communities of less than 2,500 population, while art and drawing is offered in 90.2 per cent of this group.

Grade Placement of Subjects in Relation to Size of Population Group

In order to determine the practice of cities of the several population groups with reference to grade placement of the subjects and activities of the elementary curriculum, the percentages of cities of each group which offer the several subjects in each half-grade have been computed and are here reported in a series of tables. The first of these is Table 11 which shows the percentage of 444 cities of all population groups which allotted time to the various subjects in each half-grade in 1926.

Reading.—From Table 11 it is apparent that there is practically unanimous agreement among all cities that formal instruction in reading is the business of the first four grades, and at least 95 per cent agree that it should be taught in all grades of the elementary school. There is a slight tendency to consider that the reading skills have been developed by the time the

TABLE 11

PERCENTAGE OF 444 CITIES ALLOTTING TIME TO THE VARIOUS SUBJECTS IN 1926

BY HALF-GRADES

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		In Any Grade
	L*	H**	L	H	L	H	L	H	L	H	L	H	
Reading	99.5	99.5	99.8	99.8	99.8	99.8	99.3	98.9	96.6	96.4	95.3	95.3	99.8
Phonics	68.5	69.6	66.9	66.2	44.6	40.8	10.4	10.1	3.8	3.8	2.7	2.7	71.6
Literature	33.3	34.2	33.1	33.6	34.7	34.7	35.1	35.4	34.5	34.7	34.7	34.9	45.7
Arithmetic	77.9	84.0	99.5	99.8	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.8	100.0
Language and Grammar	87.6	89.0	95.0	95.7	99.3	99.5	99.8	99.8	100.0	100.0	99.8	99.8	100.0
Penmanship	89.2	94.4	98.9	99.1	99.8	99.8	99.8	99.8	99.8	99.8	98.6	98.6	100.0
Spelling	39.4	53.6	96.2	96.8	99.1	99.1	99.1	99.1	98.1	99.1	98.6	98.6	99.3
Geography	11.4	11.9	16.4	16.7	69.6	72.1	96.2	96.4	97.5	97.5	97.3	97.3	98.0
History	21.8	21.6	25.7	25.7	44.4	45.9	66.2	66.4	85.8	86.0	91.4	91.0	94.1
Social Science	2.5	2.5	3.2	3.2	2.9	2.7	2.3	2.3	2.3	2.3	2.3	2.3	4.5
Citizenship and Civics	30.9	30.6	32.4	32.9	35.1	35.1	37.8	37.8	41.2	41.4	42.3	42.8	52.5
Nature Study and Elem. Sci.	52.3	52.7	56.5	56.3	51.1	51.1	44.8	43.9	39.4	39.0	35.4	35.6	66.7
Art and Drawing	88.1	88.7	91.4	91.4	93.9	93.9	92.8	92.8	92.8	92.8	92.3	91.7	96.4
Music	94.1	94.6	95.5	95.3	94.4	94.4	94.6	94.6	93.7	93.7	93.0	93.0	96.6
Household and Manual Arts	2.9	2.9	2.7	2.9	4.3	4.1	7.7	7.7	21.6	21.8	33.1	33.8	35.1
Handwork	40.3	40.5	34.5	33.8	24.5	24.8	16.0	16.0	10.4	10.4	8.6	8.6	44.6
Projects and Activities	9.9	9.9	8.8	8.8	7.9	7.4	6.1	6.3	5.4	5.2	4.5	4.3	14.0
Health Education	68.5	68.9	71.2	71.4	75.0	75.9	80.4	81.1	83.6	83.8	82.0	82.4	88.7
Physical Training	84.2	84.9	86.5	86.3	87.6	87.8	87.2	86.9	86.0	86.0	85.6	85.6	90.8
Recess	89.2	89.6	90.8	90.8	89.6	89.6	88.1	87.8	84.7	84.2	81.3	81.1	91.7
Opening Exercises	88.1	88.1	89.9	90.3	89.4	89.4	89.4	89.6	86.9	86.9	84.5	84.7	92.1
Supervised Study	12.2	13.3	18.2	18.7	20.7	21.4	23.9	23.9	26.6	26.6	27.5	27.3	39.4
Unassigned and Free Time	44.6	42.8	37.8	38.3	38.1	37.6	34.5	34.2	32.2	32.2	30.4	29.5	59.9
Miscellaneous	34.0	33.3	32.7	32.7	31.8	31.3	29.3	29.1	27.5	27.5	26.1	25.7	52.0

* L means the low or first half of the grade.

** H means the high or second half of the grade.

fourth grade is completed, as shown by the fact that 4 or 5 per cent of the cities discontinue formal reading in grades 5 and 6. Among those schools which teach phonics separately from reading, there seems to be close agreement that it should be taught in both grades 1 and 2, in which grades it is offered by two-thirds of all school systems. Over 40 per cent of all schools, moreover, continue phonics in the third grade. Only 10 per cent allot time to phonics in grade 4, while a few cities report this subject even in grades 5 and 6.

Arithmetic.—Instruction in arithmetic is accepted by the 444 cities as belonging in grades 2 to 6. One hundred per cent agreement is found for grades 3 to 5. As seen from the data

found in Table 11, there is a decided tendency to postpone formal instruction in this subject until the second year of school. Only 77.9 per cent of the 444 cities offer arithmetic in the low first grade and 84 per cent in the high first. From the low second grade on, however, 99.5 to 100 per cent of all cities allot time to this subject.

Language and Grammar.—Language receives time allotments in the low first grade in 87.6 per cent of the cities. This percentage increases gradually to 99.3 per cent in grade 3. Practically all cities agree that language should be taught in grades 3-6.

Penmanship.—There is some tendency to postpone the beginning of instruction in penmanship until the child reaches the second grade, and in a few cities until he begins the work of the third grade. Of the 444 cities, 89.2 per cent allot time to penmanship in the low first grade, 94.4 per cent in the high first, 98.9 per cent in the low second, and 99.1 per cent in the high second.

Spelling.—A marked tendency to omit spelling from the first grade and especially from the work of the first semester is evident from the data shown in Table 11. Only 39.4 per cent of the cities offer spelling in the low first grade and 53.6 per cent in the high first. By the time the second grade is reached, however, it is offered in 96 per cent of the cities, and from grade 3 on practically all of the cities include spelling in the program of studies.

Geography.—Geography is widely accepted as belonging especially to grades 4 to 6, in which grades it is offered by more than 96 per cent of all cities. Approximately seven out of ten cities include it in the third grade also. The proportion then falls sharply to less than 17 per cent in the second grade and to 11 per cent in grade 1.

History.—The percentage of cities which allot time to history in the elementary grades increases steadily from 21 per cent in grade 1, to 91 per cent in grade 6.

Citizenship and Civics.—Slightly more than half of the 444 cities provide definite time allotment for citizenship and civics. The percentage of cities which allot time to this subject increases evenly from 30 per cent in grade 1, to 42 per cent in grade 6.

Nature Study and Elementary Science.—The tendency in 1926

was to include nature study and elementary science more frequently in the curriculum of the lower than of the higher grades. The percentage of cities allotting time to this subject increases from 52.3 per cent in the low first grade, to 56.5 per cent in the low second and then decreases at a rather constant rate to 35 per cent in the sixth grade.

Art and Drawing.—Art and drawing is given in the first grade in 88 per cent of all cities. This percentage increases to 93.9 per cent in grade 3 and then falls off slightly in the upper grades.

Music.—Music is offered widely in all grades with slightly lower percentages in grades 5 and 6 than in grades 1 to 4.

Household and Manual Arts.—Only 35 per cent of all the cities studied allot time to household and manual arts. Among those which offer these subjects in grades 1 to 6, there is almost unanimous agreement that the work should be given in grade 6, and nearly two-thirds of this group teach household and manual arts in grade 5 as well. A few schools carry the work down into the lower grades.

Handwork.—Handwork is offered in 40 per cent of the cities in grade 1, from which point the percentage decreases steadily to 8 per cent in grade 6.

Projects and Activities.—The percentage of cities allotting time to projects and activities decreases regularly from 9.9 per cent in the first grade, to 4 per cent in the sixth grade.

Health Education.—Health education is given most often in the upper grades. The percentage of cities allotting time to it in any half-grade varies from 68.5 per cent in the low first grade, to 83.8 per cent in the high fifth grade.

Physical Training.—The most widely accepted practice is to require physical training in all grades; consequently it is rather evenly placed throughout the six grades. Between 84 and 87 per cent of the cities allot time to physical training in each half-grade.

Supervised Study.—There is a regular increase in the percentage of cities allotting time to supervised study, from 12 per cent in the low first grade, to 27 per cent in the sixth grade.

Unassigned and Free Time.—That the free expression period is making a place for itself as a part of the curriculum of the lower grades is shown by the fact that 44.6 per cent of the cities report time allotted to this activity in the low first grade and 42.8 per

cent in the high first. The gradual decrease to 29.5 per cent in the high sixth grade reflects a possible tendency to accept the free activity period readily as a part of the curriculum of the lower grades but to question its place in the upper grades.

In tables 36 to 41, one for each of the six population groups, will be found the percentages of cities of the respective groups which allot time to the several subjects in each half-grade. These tables are given in Appendix A. By turning to the table for a given population group, anyone interested may determine the degree of acceptance of any subject in any half-grade by cities of a given class. A comparison of the data found in the six tables bearing on any one subject will reveal any tendencies toward inclusion or exclusion of subjects or activities which are apparently influenced by the size of the city. Two subjects, arithmetic, and household and manual arts, will be used here as illustrations of comparisons which may be made.

The following facts as to percentage of cities allotting time to arithmetic in grades 1-3 have been brought together from Tables 36 to 41:

PERCENTAGE OF CITIES OF EACH POPULATION GROUP ALLOTTING TIME TO ARITHMETIC IN EACH HALF-GRADE, FROM THE LOW FIRST TO THE HIGH THIRD, 1926

Population Group	1L	1H	2L	2H	3L	3H
100,000 or over	57.5	62.5	100.0	100.0	100.0	100.0
30,000–100,000	66.2	73.0	98.6	100.0	100.0	100.0
10,000– 30,000	74.1	82.4	99.1	99.1	100.0	100.0
5,000– 10,000	76.0	84.0	100.0	100.0	100.0	100.0
2,500– 5,000	89.6	94.8	100.0	100.0	100.0	100.0
Less than 2,500	100.0	100.0	100.0	100.0	100.0	100.0

As shown by this table, 100 per cent of communities of less than 2,500 population allot time to arithmetic from the beginning of the first grade; but in the next larger population group, which includes communities of 2,500 to 5,000 population, a tendency to delay instruction in arithmetic until the last half of the first grade, or even until the second grade, is apparent. Of cities of this second class 89.6 per cent offer arithmetic in the low first grade and 94.8 per cent in the high first. The tendency to post-

pone arithmetic instruction until after grade 1 increases directly as the size of population group increases, until in the case of cities of 100,000 or over only 57.5 per cent begin arithmetic in the low first grade and 62.5 per cent in the high first grade. In a few cities of the middle-sized groups formal instruction in this subject does not begin until the last half of the second grade or the first half of the third grade.

A table similar to the one just given for arithmetic has been constructed for the household and manual arts. It shows the percentage of cities of each population group allotting time to household and manual arts in grades 4 to 6 as follows:

PERCENTAGE OF CITIES OF EACH POPULATION GROUP ALLOTTING TIME TO HOUSEHOLD AND MANUAL ARTS IN EACH HALF-GRADE, FROM THE LOW FOURTH TO THE HIGH SIXTH, 1926

Population Group	4L	4H	5L	5H	6L	6H
100,000 or over	25.0	25.0	57.5	57.5	72.5	72.5
30,000–100,000	13.5	13.5	37.8	37.8	52.7	52.7
10,000– 30,000	9.3	9.3	19.4	19.4	34.3	34.3
5,000– 10,000	1.3	1.3	17.3	17.3	28.0	28.0
2,500– 5,000	2.1	2.1	10.4	11.5	19.8	22.9
Less than 2,500	2.0	2.0	2.0	4.0	3.9	3.9

Two outstanding facts are seen by a glance at the preceding table:

1. The larger the population group, the greater the percentage of acceptance of household and manual arts as a part of the curriculum of the elementary school.

2. The larger the population group, the greater the tendency to push the practical arts down into the lower grades of the elementary school.

The fact that so few of the smaller communities offer these subjects may be due, in part at least, to the prevalence of small school units with limited equipment and few teachers. Under such conditions specialization and enrichment of the curriculum is much more difficult than in large elementary school units housed in modern buildings and provided with up-to-date equipment.

Average Time Allotments, by Population Groups

In a previous section of this report (Table 5, Chapter II) the average amount of time in each grade allotted to each elementary subject by 444 cities has been given for the year 1926. The 444 cities have been divided into six population groups, and a similar table for each group, which shows the average practice within the group, has been constructed. These six tables, Tables 42 to 47, which will be found in Appendix B, furnish data for comparison of average practice among the various population groups, subject by subject, and grade by grade. For convenience in making such a comparison, data from these and other basic tables have been brought together in a series of tables for each subject, which will be presented in another part of this chapter.

Comparative Ranks of Elementary Subjects in the Various Population Groups

In addition to the amount and percentage of time given to each subject in each grade, Tables 42 to 47 also include the total number of minutes per week and the percentage of total time in grades 1-6 allotted to the several subjects. From these data Table 12 has been constructed by bringing together in parallel columns the facts for each population group. The subjects are arranged in the first column in order of rank in cities having a population of 100,000 or over, as determined by the amount of time given to each subject. In the column for each population group is given the total number of minutes per week in grades 1-6 allotted to each subject, the percentage of total time, and the rank of each subject in that population group. This makes possible a means of comparison of the relative importance attached to each subject by cities of various population groups as far as average practice can be taken as a standard.

Reading, arithmetic, and language, as shown in Table 12, are the three subjects which occupy ranks 1, 2, and 3 respectively in all the different population groups. In each group except the smallest, reading, which in this table includes phonics and literature, receives at least one-fifth of all the time devoted to elementary education. A little more than one-ninth of the total time is given over to the study of arithmetic; the percentage of time given to this subject varies from 11.2 per cent in the smallest

TABLE 12

COMPARATIVE RANKS OF ELEMENTARY SUBJECTS IN 1926, BY POPULATION GROUPS, AS DETERMINED BY THE PERCENTAGE OF TIME AND THE AVERAGE AMOUNT OF TIME ALLOTTED TO EACH SUBJECT IN GRADES 1–6

(Arranged in Order of Rank in Cities Having a Population of 100,000 and Over)

Subject	Population Group																	
	100,000 and over			30,000–100,000			10,000–30,000			5,000–10,000			2,500–5,000			Less than 2,500		
	Min. per Week	Per Cent	Rank	Min. per Week	Per Cent	Rank	Min. per Week	Per Cent	Rank	Min. per Week	Per Cent	Rank	Min. per Week	Per Cent	Rank	Min. per Week	Per Cent	Rank
Reading*	1,940	21.3	1	1,928	21.0	1	1,936	21.5	1	1,897	21.2	1	1,824	20.0	1	1,493	16.0	1
Arithmetic	1,050	11.5	2	1,048	11.5	2	1,079	12.0	2	1,045	11.6	2	1,081	11.8	2	1,049	11.2	2
Language	939	10.3	3	865	9.5	3	855	9.5	3	785	8.7	3	769	8.4	3	781	8.4	3
Physical Training	621	6.8	4	532	5.8	5	500	5.5	7	456	5.1	9	434	4.7	9	368	3.9	12
Recess	588	6.5	5	576	6.3	4	592	6.6	4	659	7.3	4	631	6.9	4	731	7.8	4
Geography	521	5.7	6	507	5.5	8	536	5.9	5	531	5.9	5	519	5.7	5	540	5.8	5
Art and Drawing	513	5.6	7	510	5.6	7	452	5.0	10	423	4.7	10	403	4.4	10	286	3.1	14
Spelling	448	4.9	8	472	5.1	10	505	5.6	6	464	5.2	8	493	5.4	7	520	5.6	7
Penmanship	447	4.9	9	491	5.4	9	484	5.4	9	484	5.4	7	497	5.4	6	472	5.1	8
Music	440	4.8	10	525	5.7	6	493	5.5	8	505	5.6	6	458	5.0	8	270	2.9	16
History	311	3.4	11	288	3.1	11	275	3.0	12	321	3.6	11	330	3.6	12	349	3.7	13
Opening Exercises	265	2.9	12	244	2.7	12	292	3.2	11	298	3.3	12	297	3.3	13	428	4.6	11
Unassigned and Free Time	222	2.4	13	217	2.4	13	169	1.9	14	244	2.7	14	231	2.5	15	460	4.9	9
Nature Study and Elem. Science	162	1.8	14	110	1.2	17	107	1.2	16	128	1.4	16	118	1.3	18.5	99	1.1	18
Health Education	154	1.7	15	210	2.3	14	236	2.6	13	260	2.9	13	291	3.2	14	275	3.0	15
Household and Manual Arts	131	1.4	16	116	1.3	16	57	0.6	20	44	0.5	20	31	0.3	20	10	0.1	21
Miscellaneous	102	1.1	17	152	1.7	15	90	1.0	17	87	1.0	19	137	1.5	16	432	4.6	10
Citizenship and Civics	88	1.0	18	75	0.8	20	86	1.0	18	97	1.1	17	118	1.3	18.5	77	0.8	19
Handwork	56	0.6	19	77	0.8	19	60	0.7	19	89	1.0	18	120	1.3	17	103	1.1	17
Projects and Activities	49	0.5	20	43	0.5	22	28	0.3	22	22	0.2	21	13	0.1	22	47	0.5	20
Supervised Study	48	0.5	21	101	1.1	18	156	1.7	15	146	1.6	15	336	3.7	11	538	5.8	6
Social Science	32	0.4	22	64	0.7	21	29	0.3	21	3	.03	22	14	0.2	21	—	—	—
Total	9,127	100.0		9,151	100.0		9,017	100.0		8,988	100.0		9,145	100.0		9,328	100.0	

* Includes phonics and literature.

population group, to 12 per cent in cities of 10,000 to 30,000. Size of city makes but little difference in the amount of time given to arithmetic. In cities of 100,000 or over arithmetic receives an average weekly allotment in grades 1–6 of 1,050 minutes, as compared with 1,049 minutes allotted by communities having a population of 2,500 or less. In the case of language there is a rather marked relation between size of city and time allotted to the subject. The percentage of time given to language increases as the size of the population group increases. The two smallest groups give 8.4 per cent of the time to language, as compared with 10.3 per cent given by cities of 100,000 or over.

No other subjects receive the unanimous ranking by the several population groups which is characteristic of reading, arithmetic, and language. Physical training, for example, which is given 621 minutes per week and ranks fourth in importance in cities of 100,000 or over, decreases in importance from population group to population group until it drops to a rank of twelfth with 368 minutes per week given by the smallest communities. The average amount of time given to health education, on the other hand, increases as the size of the population group decreases. The total time allotment for health education increases regularly from 154 minutes per week given by cities having a population of 100,000 or over, to 291 minutes given by cities of from 2,500 to 5,000. If the time allotted to recess is considered along with that scheduled for physical training and health education as contributing toward the health program, the time given over to the advancement of the health objective will be found to amount to approximately 15 per cent of the total time in each population group.

Of the content subjects geography ranks the highest, coming fifth in the list of subjects in all groups except the largest, in which it ranks sixth. There is rather close agreement in the average number of minutes given to this subject; the range is from 507 minutes given by the cities of 30,000 to 100,000, to 540 minutes given by the smallest population group. The amount of time given to history varies from 275 minutes in cities of 10,000 to 30,000 to 349 minutes in communities of less than 2,500 population. Citizenship and civics receives its greatest time allotment in the 2,500 to 5,000 population group and its smallest, in the 30,000 to 100,000 group. The former allots 118 minutes per

week, or 1.3 per cent of the total time, and the latter 75 minutes per week, or 0.8 per cent. Communities of less than 2,500 population also allot but 0.8 per cent of total time to citizenship and civics. While there is no close correspondence between size of city and time given to nature study, the extremes of time given to this subject are found in the extreme population groups. The largest group gives 162 minutes per week to nature study, as contrasted with 99 minutes given by the smallest group.

Spelling and penmanship, ranking eighth and ninth respectively, receive almost identical time allotments in cities of 100,000 or over. There is no close relationship between size of city and time given to these subjects. The four middle population groups each allot 5.4 per cent of their time to penmanship; the largest group allots 4.9 per cent, and the smallest group allots 5.1 per cent.

There is a wide variation among the population groups in the ranks given to such subjects as music, and art and drawing. Art and drawing varies from rank 7 in the two largest population groups, to rank 14 in the smallest group. Music ranks sixth in two of the middle population groups, tenth in cities of 100,000 or over, and sixteenth in the smallest group.

Median Time Allotments, by Population Groups

Time allotments reported in this study up to this point have been averages in which all cities in a given group have been considered, regardless of whether or not each city allotted time to a given subject. As previously indicated, the time allotments have also been analyzed on the basis of giving consideration to only those cities which actually allot time to a specific subject. Time allotment facts arrived at in this way for each subject include the median, the maximum-minimum range, and the first and third quartiles for each half-grade. These statistical measures have been found for each of six population groups and are reported with other time allotment data in a series of tables for each subject.

For convenience in comparing current practice in the several subjects, the median time allotments for all subjects and activities have been brought together in a single table for each population group. The individual tables may be found in Appendix C, Tables 48 to 53.

Analysis of Time Allotment Data for Each Subject for 1926

The time allotment facts concerning the several subjects and activities of the elementary schools for 1926 have been assembled from the various basic tabulations, analyzed from three standpoints, and summarized in a series of three tables for each subject as follows:

1. *Table A:* In the first table the total time allotted to a given subject in grades 1–6 is considered, and the facts needed to answer the following questions are presented: What is the average amount of time given to this subject during the six years of the elementary school? What percentage of the total time available for elementary education is devoted to this subject? How many cities allot time to this subject? Among those cities which offer the subject, what is the central tendency as shown by the median time allotment, and what is the degree of variability as indicated by the range of the middle 50 per cent of the cases? How great is the variation between the maximum and the minimum time devoted to the subject? How do all these measures compare for the various population groups?

2. *Table B:* The second table deals with the average amount of time devoted to each subject in each grade, considering all cities in each population group. The following questions are answered: What is the average present practice for this subject in each grade, and what per cent of the time available for instruction in this grade is given over to the subject in question? How does this practice vary from grade to grade and from population group to population group?

3. *Table C:* In the third of the series of tables present practice in time allotment is analyzed for each half-grade and for each population group. Only those cities which allot time to the subject are considered in this table. The number of cities offering the subject in each half-grade is reported, and the practice of those cities which allot time to the subject is given in terms of (1) median time allotments, (2) the maximum and minimum amount of time devoted to the subject in each half-grade, and (3) the range of the middle 50 per cent of the time allotments made by these cities as shown by first and third quartiles of the time distribution, for each population group.

This third series of tables makes it possible for a superintendent in any community to compare his time allotments for a specific

subject in any half-grade with the time allotments of other communities which are in a population class equal to his own, and which offer the same subject in that particular half-grade in which he is at the moment interested.

Attention should be called to the fact that Table C includes the time allotments reported for the kindergarten as well as for each half-grade of the elementary school. It will be noted that the number of kindergartens reporting time allotted to any subject is much smaller than the number of cities in each group. This is due in part to the fact that some cities did not report time allotments for kindergartens because of the difficulty of allocating time to specific subjects, and in part to the fact that some communities, especially the smaller ones, do not support kindergartens as part of the public school system. Time allotments in the kindergartens were reported by 115 out of 444 cities. Kindergarten reports were received from the several population groups as follows: cities of 100,000 population or over, 11; 30,000 to 100,000 population, 18; 10,000 to 30,000 population, 27; 5000 to 10,000 population, 30; 2500 to 5000 population, 24; less than 2500 population, 5.

Some of the facts reported in the C series of tables have been shown graphically in a number of charts including the 15 subjects which follow: arithmetic, language, reading, phonics, literature, penmanship, spelling, geography, history, citizenship and civics, nature study, art and drawing, music, physical training, and health education. The chart for each subject is based on the current time allotment practice in some one of the six population groups, and shows in graphic form the following facts for each half-grade: (1) the median number of minutes per week allotted to the given subject, (2) the greatest amount of time given to the subject by any one city, (3) the least amount of time, and (4) the range of the middle 50 per cent of the time allotments made by the group.

The remaining sections of this chapter will be given over to a brief discussion of a few outstanding time allotment facts in connection with each elementary subject or activity. Any reader who may wish to make a detailed study of current practice in time allotment relative to any subject of the elementary curriculum will find complete data available in the series of A, B, and C tables for each subject.

Reading

(See Tables 13A, B, and C; also Chart 6.)

Of the 444 cities included in this investigation, 443 allot time specifically to reading. One city failed to mention reading in its schedule, but in this case the size of the allotment to "English" indicated that reading might be included with language under that heading.

As was pointed out in a previous chapter, reading has always held and continues to hold first place in the time schedule of the elementary schools. This is especially true in the first grades where in cities of the largest population group it receives on an average nearly a third and in the second grade more than one-fourth of the time.

A few of the significant tendencies which are brought out by a study of the facts given in these tables on reading are:

1. The larger the population group, the greater the amount of time given to reading.

2. More time is given to reading in the low first grade than in any other half-grade. This is true for all population groups except the smallest.

3. The amount of time given to reading decreases from the first grade to the sixth grade. The rate of decrease is greatest from grade 2 to grade 5.

4. There is a wide variation in the total time allotted to reading among the cities of each population group; one city has an allotment 12 times greater than another. In the population group which has the smallest variation, the maximum amount of time given to reading is 2,475 minutes per week in all grades, while the minimum is 600 minutes.

5. The greatest variability in time allotment for reading is found in the low first grade; in general, the variability decreases from the first to the sixth grade. This is shown graphically for cities of 100,000 or over in Chart 6. The same is true of all population groups. One city allots 825 minutes per week, or 165 minutes per day to reading in the first grade, while at least two others report as little as 15 minutes per day, or 75 minutes per week.

A search through the literature on reading fails to show any conclusive experimental evidence bearing on the amount of time necessary for instruction in reading. Gray in his comprehensive

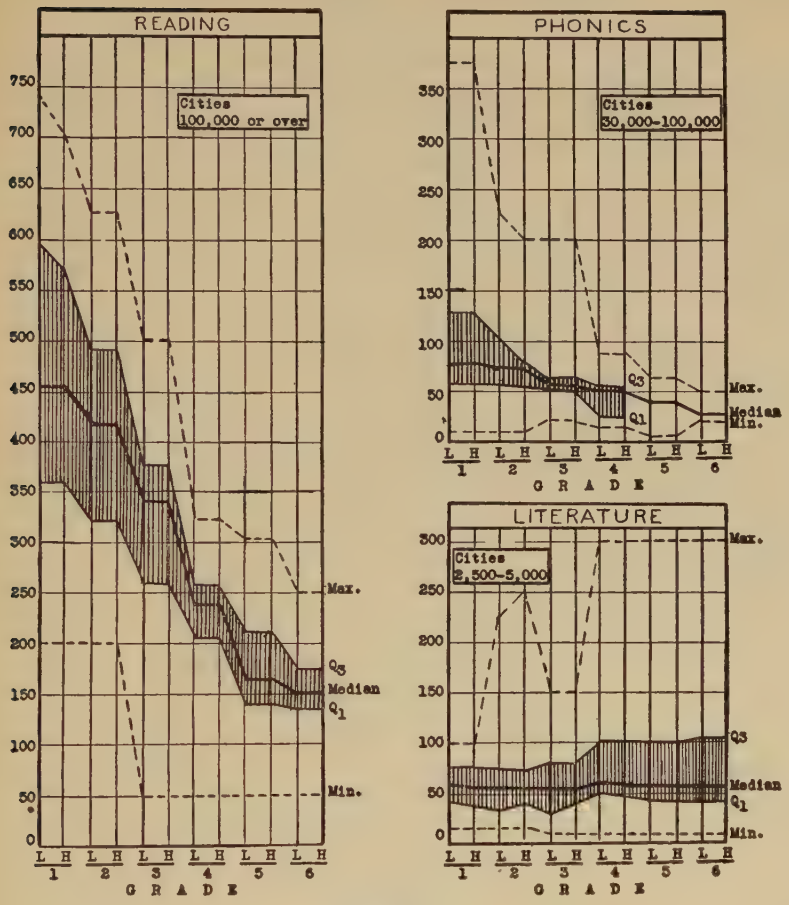

CHART 6

VARIABILITY IN TIME ALLOTMENTS FOR READING, PHONICS, AND LITERATURE, 1926

Showing the Maximum-Minimum Range, the Range of the Middle 50 Per Cent, and the Median Number of Minutes per Week Allotted in Each Half-Grade in Cities of the Indicated Population Groups

summary [1] of all scientific investigations in the field of reading, made in America and England prior to July, 1924, includes a few studies of time allotment practice such as those of Holmes, Kirk, and Ayer, but reports no investigations bearing on time allotment in relation to achievement in reading.

[1] Gray, William S. *Summary of Investigations Relating to Reading.* University of Chicago, Supplementary Educational Monographs No. 28, 1925.

TABLE 13A

READING

Total Number of Minutes per Week Allotted to Reading in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Reading					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	1,558	17.1	443	240	2,825	1,576	1,259	1,867
100,000 and over ..	40	1,723	18.9	40	600	2,475	1,775	1,400	2,050
30,000–100,000	74	1,651	18.0	73	505	2,825	1,712	1,337	2,029
10,000–30,000	108	1,664	18.5	108	610	2,565	1,683	1,400	2,000
5,000–10,000	75	1,545	17.2	75	240	2,470	1,541	1,264	1,837
2,500–5,000	96	1,497	16.4	96	475	2,600	1,537	1,210	1,780
Less than 2,500 ...	51	1,204	12.9	51	450	2,150	1,238	896	1,481

TABLE 13B

READING

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Reading in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	388	28.8	348	24.3	293	19.1	212	13.4	168	10.4	149	9.2	1,558	17.1
100,000 and over	40	461	32.4	411	27.4	325	21.0	215	13.8	166	10.6	145	9.5	1,723	18.9
30,000–100,000 ..	74	412	30.3	370	25.2	304	19.8	227	14.4	177	11.1	161	10.0	1,651	18.0
10,000–30,000 ...	108	416	31.1	369	26.0	313	20.9	221	14.1	182	11.4	163	10.2	1,664	18.5
5,000–10,000	75	380	28.5	346	24.5	300	20.0	215	13.9	160	10.0	144	9.0	1,545	17.2
2,500–5,000	96	369	27.7	331	23.1	283	18.5	206	13.0	165	10.1	143	8 7	1,497	16.4
Less than 2,500 .	51	286	21.6	260	18.4	219	14.0	175	10.7	143	8.5	121	7.1	1,204	12.9

TABLE 13C

READING

Number of Minutes per Week Allotted to Reading in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		740	700	625	625	500	500	320	320	305	305	250	250
	Q_3		590	567	490	490	377	377	258	258	211	211	174	174
	Median ...		456	455	417	417	347	343	238	238	159	159	151	151
	Q_1		360	360	320	320	260	257	205	205	139	139	132	132
	Minimum .		200	200	200	200	50	50	50	50	50	50	50	50
No. of Cities 40	No. Cases .		40	40	40	40	40	40	39	39	39	39	38	38
30,000–100,000	Maximum	50	675	675	605	605	600	600	500	500	500	500	325	325
	Q_3		540	540	448	448	379	379	272	272	223	220	214	213
	Median ...		445	444	406	406	318	318	238	241	204	203	169	168
	Q_1		314	309	301	273	228	229	203	203	151	151	139	139
	Minimum .	25	125	125	100	100	100	100	75	75	40	40	40	40
No. of Cities 74	No. Cases .	2	72	72	73	73	73	73	73	73	70	70	70	70
10,000–30,000	Maximum	125	825	825	675	675	575	575	445	445	350	350	350	350
	Q_3		508	506	450	448	380	390	268	268	230	229	212	211
	Median ...	110	430	420	364	365	316	313	224	227	201	200	158	158
	Q_1		318	314	306	308	247	245	156	156	143	143	134	133
	Minimum .	80	150	150	150	150	125	100	20	20	20	20	20	20
No. of Cities 108	No. Cases .	3	108	108	108	108	108	108	108	108	108	108	107	107
5,000–10,000	Maximum	100	650	650	615	615	525	525	440	440	350	350	350	350
	Q_3		506	504	419	417	401	377	254	254	216	216	207	207
	Median ...		402	378	343	333	309	310	219	219	177	178	155	154
	Q_1		295	303	271	271	217	217	159	159	138	140	116	118
	Minimum .	50	75	75	75	75	90	90	50	25	30	30	25	25
No. of Cities 75	No. Cases .	2	75	75	75	75	75	75	74	74	70	69	69	69
2,500–5,000	Maximum	350	750	700	600	600	530	530	450	450	300	300	300	300
	Q_3	315	454	457	417	420	367	360	246	250	217	216	201	202
	Median ...	230	370	360	318	318	300	270	213	214	169	169	150	150
	Q_1	205	255	247	255	247	216	211	158	156	132	131	122	118
	Minimum .	150	150	125	150	150	60	30	30	75	50	50	50	50
No. of Cities 96	No. Cases .	5	96	96	96	96	96	96	96	94	92	92	90	90
Less than 2,500 ...	Maximum		750	750	525	525	425	425	375	375	300	300	275	275
	Q_3		333	333	335	335	271	271	228	228	190	190	176	176
	Median ...		238	243	242	242	226	226	163	166	143	145	119	119
	Q_1		202	202	178	179	148	152	123	123	114	114	83	83
	Minimum .		75	75	75	75	75	75	75	75	25	25	25	25
Cities 51	No. Cases .		51	51	51	51	51	51	51	51	50	50	49	49

TABLE 14A

PHONICS

Total Number of Minutes per Week Allotted to Phonics in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Phonics					
				No. Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	150	1.6	318	20	715	202	150	277
100,000 and over ..	40	67	0.7	13	62.5	715	165	128	197
30,000–100,000	74	132	1.4	46	20	625	212	146	275
10,000–30,000	108	157	1.7	79	50	700	202	149	283
5,000–10,000	75	167	1.9	55	50	500	230	170	289
2,500–5,000	96	172	1.9	77	37	460	211	151	298
Less than 2,500 ...	51	167	1.8	48	50	400	180	134	234

TABLE 14B

PHONICS

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Phonics in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	68	5.0	51	3.6	24	1.6	5	0.3	1	0.1	1	0.1	150	1.6
100,000 and over	40	25	1.8	21	1.4	11	0.7	7	0.4	2	0.1	1	0.1	67	0.7
30,000–100,000 ..	74	58	4.3	44	3.0	23	1.5	4	0.3	2	0.1	1	0.1	132	1.4
10,000–30,000 ...	108	70	5.2	54	3.8	26	1.7	5	0.3	1	0.1	1	0.1	157	1.7
5,000–10,000	75	83	6.2	55	3.9	25	1.7	2	0.1	1	0.1	1	0.1	167	1.9
2,500–5,000	96	75	5.6	62	4.3	26	1.7	6	0.4	2	0.1	1	0.1	172	1.9
Less than 2,500 .	51	79	6.0	56	4.0	27	1.7	5	0.3					167	1.8

TABLE 14C

PHONICS

NUMBER OF MINUTES PER WEEK ALLOTTED TO PHONICS IN EACH HALF-GRADE BY THOSE CITIES WHICH REPORT DEFINITE TIME ASSIGNMENTS FOR THE SUBJECT

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		300	300	225	225	110	110	80	80	40	40		
	Q_3		108	106	73	73	76	76	79	79				
	Median ...		65	59	58	58	58	58	73	73	35	35	40	40
	Q_1		56	54	53	53	48	48	43	43				
	Minimum .		50	50	40	40	25	25	25	25	25	25		
No. of Cities 40	No. Cases .		10	11	11	11	7	7	5	5	2	2	1	1
30,000–100,000	Maximum	30	375	375	225	200	200	200	88	88	66	66	50	50
	Q_3		128	126	101	80	68	70	58	58				
	Median ...		77	79	73	72	56	56	52	52	40	40	28	28
	Q_1		59	59	58	57	51	51	24	24				
	Minimum .	20	10	10	10	10	20	20	15	15	8	8	20	20
No. of Cities 74	No. Cases .	2	42	43	42	42	29	28	7	7	4	4	3	3
10,000–30,000 . ..	Maximum		375	375	255	255	100	100	100	100	50	50		
	Q_3		107	107	103	103	75	74	57	57				
	Median ...		78	79	74	73	57	57	53	53	50	50	45	45
	Q_1		58	60	56	55	51	51	29	29				
	Minimum .		25	25	25	22	15	5	15	15	40	40		
No. of Cities 108	No. Cases .		78	78	76	75	53	47	11	11	2	2	2	2
5,000–10,000	Maximum		350	300	200	200	100	100	50	50				
	Q_3		145	145	104	102	69	68	45	45				
	Median ...	25	104	102	76	75	56	55	28	28	23	23	25	25
	Q_1		73	73	57	56	45	39	24	24				
	Minimum .		40	40	25	25	5	5	20	20				
No. of Cities 75	No. Cases .	1	54	54	53	53	38	35	6	6	4	4	2	2
2,500–5,000	Maximum	75	275	300	200	300	125	125	100	100	50	50	50	50
	Q_3		122	120	105	105	77	76	57	57				
	Median ...	73	101	78	77	78	57	57	51	52	30	30	35	35
	Q_1		60	59	59	59	51	51	27	28				
	Minimum .	25	25	25	25	25	25	20	20	20	20	20	20	20
No. of Cities 96	No. Cases .	3	73	76	71	69	42	37	11	10	4	4	3	3
Less than 2,500 ...	Maximum		300	300	200	200	100	100	75	75				
	Q_3		104	101	76	76	60	70	55	55				
	Median ...	25	75	74	59	59	54	55	35	35	20	20	20	20
	Q_1		57	57	52	52	33	48	25	25				
	Minimum .		25	25	25	25	15	15	20	20				
No. of Cities 51	No. Cases .	1	47	47	44	44	29	27	6	6	1	1	1	1

The National Committee on Reading in its report [2] published in 1925 makes the following statement regarding time allotments for reading in the first grade:

> Current practice with regard to time allotment developed when reading activities were limited almost exclusively to the reading period. According to the program which has been recommended reading is intimately related to practically every classroom activity. It follows that less rather than more time should be used for daily reading practice. . . . . In general, 80 minutes per day is a reasonable time allotment in larger schools.

The committee further states that "Current practice would justify a recommendation of about 70 minutes a day for reading in the second grade and 60 in the third grade." If, in the absence of experimental evidence, the recommendations of the National Committee on Reading be accepted, then the time allotments of more than 50 per cent of the cities of all groups above 5,000 population are excessive.

Phonics

(See Tables 14A, B, and C; also Chart 6.)

In reporting time allotment schedules, superintendents were requested to indicate time allotted to phonics only when it is taught in a period separate from the regular reading period. Approximately three-fourths of all cities studied report phonics as having a definite time allotment. In general, the smaller the population group, the greater the percentage of communities so reporting. In addition to the 318 cities whose allotments have been tabulated, 57 cities state that instruction in phonics is included as a part of the reading period. Of cities exceeding 100,000 in population, 33 per cent report separate time allotments for this subject, as compared with 94 per cent of the communities of less than 2,500 population.

Among the 318 cities which allot time to phonics, the median total allotment for grades 1–6 is 202 minutes per week. The middle fifty per cent of the cities allot between 150 and 277 minutes. The maximum amount of time, which is 715 minutes per week, is allotted by one of the cities in the largest population group, whereas the minimum amount, 20 minutes, is given by one of the cities having a population of 30,000 to 100,000. Among

[2] Gray, William S. and Others. "Report of the National Committee on Reading," *National Society for the Study of Education, Twenty-fourth Yearbook*, Part I, 1925, pp. 42f.

the six population groups the two extreme groups allot the least amount of time to phonics.

Phonics is taught principally in grades 1–3, but a number of cities limit it to the first two grades. A few school systems in each population group continue their allotments to this subject up through grade 6. Instruction in phonics is offered in a few kindergartens where it receives from 4 to 15 minutes per day. The maximum amount of time given in the first grade is 75 minutes daily, while the minimum is 5 minutes per day. The median allotment in the first grade varies from 65 minutes a week in the largest population group, to 104 minutes a week in cities of from 5,000 to 10,000 population. Phonics receives its greatest time allotment in the first grade with a diminishing amount of time in each successive grade. Chart 6, which exhibits the variation in time allotment for cities of 30,000 to 100,000 population, is typical of the practice in the several population groups.

Literature

(See Tables 15A, B, and C; also Chart 6.)

Time allotments for literature as defined for purposes of this investigation include time given to those stories, poems, and literary selections which are taught strictly from the æsthetic and cultural standpoint. Nearly half of the cities report time allotments for this subject. The total number of minutes per week reported for grades 1–6 varies from 10 to 1,090. The larger the population group, the greater the amount of time given to literature by those cities which include it in their program of studies. However, the smaller the population group, the larger the percentage of cities reporting literature. The median amount of time given by the smallest population group is 181 minutes, as compared with 450 minutes scheduled by cities having a population of 100,000 or over. There seems to be no regular trend from grade to grade in time distributions for literature.

Apparently literature has secured a very definite place in the curriculum of the kindergarten. As much as 200 minutes per week are allotted to it in some kindergartens, with the median ranging from 60 to 105 minutes according to the population group. There is no definite relation between size of city and the amount of time given to literature in the kindergarten.

TABLE 15A

LITERATURE

Total Number of Minutes per Week Allotted to Literature in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Literature					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	157	1.7	203	10	1,090	291	174	421
100,000 and over ..	40	150	1.7	12	225	1,000	450	366	533
30,000–100,000	74	145	1.6	25	124	1,090	358	232	637
10,000–30,000	108	115	1.3	43	40	530	304	206	394
5,000–10,000	75	185	2.1	45	30	935	287	202	422
2,500–5,000	96	155	1.7	53	40	900	259	142	407
Less than 2,500 ...	51	122	1.3	25	10	825	181	112	369

TABLE 15B

LITERATURE

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Literature in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	22	1 6	22	1.5	35	2.3	25	1.6	26	1.6	27	1.7	157	1.7
100,000 and over	40	28	2.0	25	1.7	24	1.6	23	1.5	25	1.6	25	1.6	150	1.7
30,000–100,000 ..	74	22	1.6	22	1.5	25	1.6	22	1.4	29	1.8	25	1.6	145	1.6
10,000–30,000 ...	108	17	1.3	18	1.3	20	1.3	20	1.3	19	1.2	21	1.3	115	1.3
5,000–10,000	75	27	2.0	25	1.8	25	1.7	35	2.3	36	2.3	37	2.3	185	2.1
2,500–5,000	96	22	1.7	23	1.6	22	1.4	29	1.8	27	1.7	32	1.9	155	1.7
Less than 2,500 .	51	21	1.6	19	1.3	13	0.8	20	1.2	25	1.5	24	1.4	122	1.3

TABLE 15C

LITERATURE

Number of Minutes per Week Allotted to Literature in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	150	250	250	250	250	135	135	145	145	150	150	150	150
	Q_3		123	123	123	123	110	110	123	123	128	128	128	128
	Median ...	90	78	78	75	75	73	73	90	90	105	105	105	105
	Q_1		68	68	58	58	60	60	68	68	75	75	85	85
	Minimum .	50	25	25	30	30	40	40	50	50	40	40	40	40
No. of Cities 40	No. Cases .	4	11	11	11	11	12	12	10	10	10	10	10	10
30,000–100,000 . ..	Maximum	125	260	260	245	245	220	220	150	150	250	250	250	250
	Q_3	101	95	95	104	105	86	86	106	105	110	110	108	108
	Median ...	76	73	73	59	60	65	65	65	63	70	70	66	68
	Q_1	59	54	54	50	52	53	53	53	51	53	53	54	54
	Minimum .	50	15	15	14	14	19	19	16	16	20	20	15	15
No. of Cities 74	No. Cases .	11	20	20	21	22	23	23	21	22	24	24	23	23
10,000–30,000	Maximum	200	100	100	110	110	200	200	125	125	125	125	250	250
	Q_3	90	73	71	69	68	67	70	83	79	102	102	95	100
	Median ...	60	57	56	56	55	56	56	62	62	73	71	58	59
	Q_1	53	50	45	49	47	48	50	52	51	51	51	50	50
	Minimum .	25	25	14	25	25	15	15	15	15	20	20	20	16
No. of Cities 108	No. Cases .	12	32	34	34	35	37	36	34	34	29	29	32	32
5,000–10,000	Maximum	195	175	200	150	240	215	180	180	195	200	200	200	200
	Q_3	107	65	67	67	67	73	73	80	79	105	100	109	108
	Median ...	76	55	55	57	56	56	57	66	67	73	73	80	80
	Q_1	65	48	48	49	49	43	46	53	54	40	40	50	50
	Minimum .	25	21	21	23	23	20	20	20	20	25	25	25	25
No. of Cities 75	No. Cases .	20	32	32	31	31	31	31	37	38	36	36	32	32
2,500–5,000	Maximum	125	100	100	225	250	150	150	300	300	300	300	300	300
	Q_3	95	76	77	75	73	79	79	103	103	101	100	105	103
	Median ...	73	60	58	56	56	56	57	61	59	57	58	57	57
	Q_1	93	42	38	35	40	31	36	52	50	45	44	43	45
	Minimum .	20	15	15	15	15	10	10	10	10	10	10	10	10
No. of Cities 96	No. Cases .	12	38	40	36	36	37	39	39	38	38	39	39	40
Less than 2,500....	Maximum	125	250	250	250	250	100	100	200	200	180	180	200	200
	Q_3		93	93	75	75	59	65	101	101	105	107	79	79
	Median ...	105	54	54	55	55	50	50	71	71	73	73	57	57
	Q_1		26	26	43	43	26	26	38	38	53	50	38	38
	Minimum .	10	10	10	15	15	15	15	10	10	10	10	15	15
No. of Cities 51	No. Cases .	3	15	15	14	14	14	14	15	15	16	16	18	18

Arithmetic

(See Tables 16A, B, and C; also Chart 7.)

Of the total time given to elementary education in grades 1–6 by 444 cities in 1926, 11.6 per cent was devoted to arithmetic. The size of the population group seems to have but little influence upon the percentage of time given to this subject. Contrary to what is probably common opinion, the smallest communities give a smaller proportion of their time to arithmetic than the larger cities. Schools in communities of less than 2,500 give 11.2 per cent, while the greatest percentage (12 per cent) is given by schools in cities of from 10,000 to 30,000. There are much greater differences of practice within population groups than between population groups.

All cities report arithmetic as one of the subjects of their elementary school curriculum, but some schools devote almost 4½ times as much time to it as others. The total number of minutes per week given to arithmetic in all grades ranges from a minimum of 405 minutes to a maximum of 1,797 minutes. Twenty-five per cent of the schools devote less than 916 minutes per week to this subject, while 25 per cent give more than 1,245 minutes per week. The median amount of time spent on arithmetic in the first six years of school is 1,076 minutes per week. The degree of variability as indicated by the interquartile range is greatest in communities of less than 2,500 population, while the closest agreement as shown by this same measure is in communities of 30,000 to 100,000.

Table 16B shows the average number of minutes per week given to arithmetic in each grade, together with the percentage of time devoted to this subject. Apparently arithmetic assumes an increasing importance in succeeding grades from the first grade, in which it secures 5.9 per cent of the school time of 444 cities, to the fourth grade, in which more than one-eighth of the time, or 13.3 per cent, is given over to its study. The proportion of time scheduled for arithmetic in grades 5 and 6 is equal to that given in grade 4. The highest percentage of time given to arithmetic by any group is in the fourth and fifth grades in cities of from 10,000 to 30,000 population, which set aside 14 per cent of their time for instruction in this subject.

Present practice in time allotments for arithmetic, giving con-

sideration only to those schools making allotments in each half-grade, is shown in Table 16C. As pointed out in another section of this chapter, the larger the population group, the larger the percentage of schools omitting arithmetic from the low and high first grades. However, the median time allotted by those schools in cities of 100,000 population or over which do offer arithmetic in low and high first grades is one-third greater than the time allotted to the same subject in the same grades in the three groups of cities included in a population range of from 5,000 to 100,000. The median for cities of 100,000 or over corresponds closely to the time allotments in communities of less than 5,000. The range of allotments in the low first grade is from 15 minutes per week to 325 minutes. Some cities give more than 22 times as many minutes to arithmetic in the low first grade as do others. The range in the high first grade is almost as great. As the higher grades are reached, greater agreement is apparent; the range in the low third grade is from 50 to 400 minutes per week, while in the high sixth it extends from 75 to 350 minutes. The median time devoted to arithmetic in each of grades 3 to 6 by the several population groups varies within the narrow limits of from 40 to 45 minutes per day, while for grade 2 it approximates 30 minutes daily in each group.

There is a marked tendency in all population groups for time allotments in arithmetic to increase sharply from grades 1 to 3 and then to reach their level in grades 4 to 6. Another grade-to-grade relationship is found in the tendency for the degree of variability to decrease with the advance from the lower to the upper grades. The middle 50 per cent of time allotments are much more closely grouped about the median in the upper than in the lower grades. A rather close relationship between variability in arithmetic allotments and size of population group is also apparent. In general, time allotments for arithmetic in the several grades show much less dispersion within the larger than within the smaller population groups.

Chart 7 exhibits graphically the current practice in allotting time to arithmetic among cities of from 10,000 to 30,000 population.

As yet conclusive evidence relative to optimum time allotments for arithmetic in the several grades is not available. In fact, among 420 investigations relating to arithmetic, as summarized

TABLE 16A

ARITHMETIC

Total Number of Minutes per Week Allotted to Arithmetic in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Arithmetic					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	1,063	11.6	444	405	1,797	1,076	916	1,245
100,000 and over ..	40	1,050	11.5	40	575	1,560	1,060	900	1,216
30,000–100,000	74	1,048	11.5	74	500	1,610	1,055	931	1,215
10,000–30,000	108	1,079	12.0	108	475	1,797	1,100	941	1,232
5,000–10,000	75	1,045	11.6	75	505	1,520	1,062	919	1,232
2,500–5,000	96	1,081	11.8	96	575	1,645	1,087	921	1,269
Less than 2,500 ...	51	1,049	11.2	51	405	1,600	1,119	838	1,316

TABLE 16B

ARITHMETIC

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Arithmetic in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	80	5.9	146	10.2	196	12.8	211	13.3	215	13.3	215	13.3	1,063	11.6
100,000 and over	40	60	4.2	145	9.7	204	13.2	213	13.6	218	13.9	210	13.8	1,050	11.5
30,000–100,000 ..	74	67	4.9	148	10.1	191	12.4	213	13.5	213	13.3	216	13.4	1,048	11.5
10,000–30,000 ...	108	69	5.2	145	10.2	203	13.5	219	14.0	223	14.0	220	13.8	1,079	12.0
5,000–10,000	75	74	5.6	140	9.9	188	12.5	207	13.4	217	13.6	219	13.7	1,045	11.6
2,500–5,000	96	97	7.3	148	10.3	197	12.9	206	13.0	216	13.3	217	13.2	1,081	11.8
Less than 2,500 .	51	113	8.5	155	11.0	191	12.2	203	12.4	194	11.5	193	11.4	1,049	11.2

TABLE 16C

ARITHMETIC

Number of Minutes per Week Allotted to Arithmetic in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		225	225	250	250	300	300	300	300	300	300	300	300
	Q_3		141	143	173	173	244	244	246	246	246	246	243	243
	Median ...		103	105	145	145	213	213	220	220	222	222	219	219
	Q_1		58	61	112	112	157	157	190	190	206	206	204	204
	Minimum .		25	25	50	50	120	120	125	125	125	125	125	125
No. of Cities 40	No. of Cases		23	25	40	40	40	40	40	40	40	40	39	39
30,000–100,000	Maximum	25	300	225	300	300	325	325	300	300	300	300	300	300
	Q_3		142	135	179	179	220	222	249	251	250	250	251	251
	Median ...	25	76	75	150	150	205	205	218	218	220	220	225	225
	Q_1		55	59	118	117	154	154	202	202	204	204	205	205
	Minimum .	25	15	25	50	50	75	75	50	50	75	75	100	100
No. of Cities 74	No. of Cases	2	49	54	73	74	74	74	74	74	74	74	74	74
10,000–30,000	Maximum	50	225	315	250	250	400	400	300	300	350	350	350	350
	Q_3		115	116	193	193	242	241	251	252	251	251	249	249
	Median ...	48	75	75	148	149	210	211	221	223	230	229	224	224
	Q_1		57	58	115	115	158	160	205	206	208	208	206	206
	Minimum .	20	15	15	50	50	100	100	125	125	125	125	100	100
No. of Cities 108	No. of Cases	5	80	89	107	107	108	108	108	108	108	108	108	108
5,000–10,000	Maximum	50	225	225	250	250	325	325	300	300	325	325	325	325
	Q_3		120	117	185	183	228	229	248	247	251	249	253	253
	Median ...	30	78	78	141	143	207	207	223	224	223	221	226	225
	Q_1		63	62	109	110	145	148	178	178	204	203	202	202
	Minimum .	18	30	20	50	50	60	60	75	75	100	100	100	100
No. of Cities 75	No. of Cases	4	57	63	75	75	75	75	75	75	75	75	75	75
2,500–5,000	Maximum	225	325	325	350	350	375	375	320	320	350	325	320	320
	Q_3		144	140	180	177	236	236	244	244	254	255	257	256
	Median ...	70	103	106	144	143	208	208	213	215	222	219	224	220
	Q_1		63	63	111	111	153	152	164	164	167	167	170	168
	Minimum .	25	25	25	50	50	50	100	100	100	100	100	100	100
No. of Cities 96	No. of Cases	3	86	91	96	96	96	96	96	96	96	96	96	96
Less than 2,500 ...	Maximum	100	245	245	350	350	300	300	325	325	375	375	375	375
	Q_3		151	149	205	205	245	249	266	266	248	245	238	238
	Median ...		111	111	149	149	201	201	218	218	204	206	206	206
	Q_1		69	69	119	119	142	142	136	136	142	142	144	144
	Minimum .	20	25	25	50	50	50	50	75	75	75	75	75	75
No. of Cities 51	No. of Cases	2	51	51	51	51	51	51	51	51	51	51	51	51

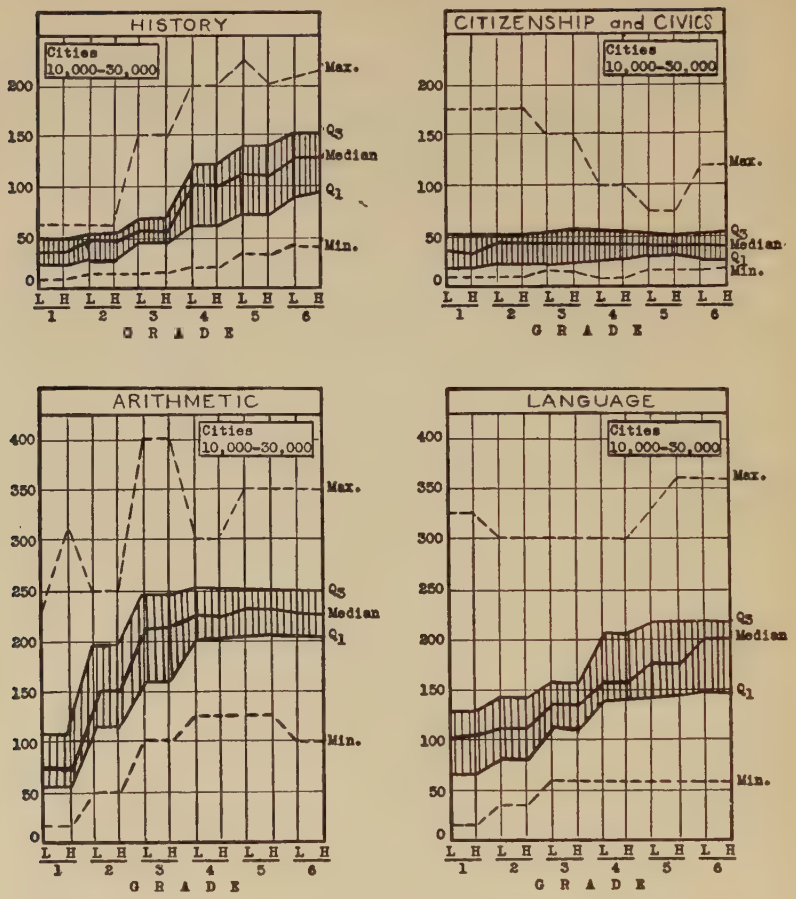

CHART 7

VARIABILITY IN TIME ALLOTMENTS FOR ARITHMETIC, LANGUAGE, HISTORY, AND CITIZENSHIP AND CIVICS, 1926

Showing the Maximum-Minimum Range, the Range of the Middle 50 Per Cent, and the Median Number of Minutes per Week Allotted in Each Half-Grade in Cities of the Indicated Population Groups

by Buswell and Judd,[3] surprisingly few studies bearing on time allotment and achievement in arithmetic are to be found.

[3] Buswell, Guy T., and Judd, Charles H. *Summary of Education Investigations Relating to Arithmetic.* University of Chicago, Supplementary Educational Monographs, No. 27, June, 1925.

Buswell, Guy T. *Summary of Arithmetic Investigations* (1925). Supplement No. 1, A Continuation of Monograph No. 27.

Buswell, Guy T. *Summary of Arithmetic Investigations* (1926). Supplement No. 2, A Continuation of Monograph No. 27.

Although citing no specific evidence and setting up no definite allotment recommendations, the committee [4] of the Department of Superintendence on the revision of the curriculum in arithmetic includes among its "General Statements Offered as Guides in Revision of Arithmetic Curriculum" the following:

> On the basis of research investigations to date, the committee feels warranted in urging less time to arithmetic than that devoted to the subject in practically all school systems throughout the country.

The wide range of time given to arithmetic as found in this investigation indicates that time allotments in many cities are much higher than is necessary. Until such time as experimentally determined optimum schedules are established, superintendents whose allotments are much above the median, and especially superintendents of those cities ranging beyond the third quartile, should investigate their methods of teaching and the achievements of pupils to determine whether or not their large expenditures of time are justified by the results.

Language and Grammar

(See Tables 17A, B, and C; also Chart 7)

All cities included in this study allot time to language and grammar, although the allotments in some school systems are 14 times as great as in others. There is a definite relationship between size of population group and the amount of time given to this subject. In general, as the size of the city increases, the amount of time given to the study of language increases. It is suggested that the presence of large foreign groups in many of the larger cities may be one of the factors which have operated to cause this difference. Cities of 100,000 population or over give 10.3 per cent of the time of the elementary schools to language, while the two smallest groups allot 8.4 per cent.

The amount of time given to language increases regularly from the first grade to the sixth. This is true of all population groups. The percentage of time given by 444 cities increases from 6.4 per cent in the first grade, to 10.7 per cent in grade 6. Cities of the largest population group give 8.5 per cent in the first grade and increase this to 12.3 per cent in the sixth grade.

[4] Scott, Zenos E., and Others. "Arithmetic," in *The Nation at Work on the Curriculum*, pp. 173-220, *Fourth Yearbook of the Department of Superintendence of the National Education Association, 1926.*

TABLE 17A

LANGUAGE AND GRAMMAR

Total Number of Minutes per Week Allotted to Language and Grammar in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Language and Grammar					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	826	9.1	444	200	2,825	825	684	955
100,000 and over ..	40	939	10.3	40	450	1,600	950	750	1,100
30,000–100,000	74	865	9.5	74	200	2,825	860	706	979
10,000–30,000	108	855	9.5	108	240	1,800	862	757	995
5,000–10,000	75	785	8.7	75	225	1,240	816	609	940
2,500–5,000	96	769	8.4	96	240	1,780	755	657	883
Less than 2,500 ...	51	781	8.4	51	450	1,500	779	660	921

TABLE 17B

LANGUAGE AND GRAMMAR

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Language and Grammar in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	86	6.4	104	7.2	136	8.8	158	10.0	169	10.5	173	10.7	826	9.1
100,000 and over	40	121	8.5	124	8.3	146	9.4	177	11.3	184	11.7	187	12.3	939	10.3
30,000–100,000 ..	74	100	7.4	112	7.6	144	9.4	162	10.3	172	10.8	175	10.9	865	9.5
10,000–30,000 ...	108	90	6.7	108	7.6	136	9.1	165	10.5	176	11.0	180	11.3	855	9.5
5,000–10,000	75	77	5.8	100	7.1	130	8.7	151	9.7	163	10.2	164	10.3	785	8.7
2,500–5,000	96	67	5.0	89	6.2	130	8.5	151	9.5	162	10.0	170	10.3	769	8.4
Less than 2,500 .	51	75	5.7	100	7.1	142	9.1	142	8.7	159	9.4	163	9.6	781	8.4

TABLE 17C

LANGUAGE AND GRAMMAR

Number of Minutes per Week Allotted to Language and Grammar in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	200	375	375	275	275	275	275	300	300	280	280	280	280
	Q_3	135	152	152	155	155	185	185	211	213	215	215	224	224
	Median ...	110	127	127	134	134	151	152	171	171	190	190	205	205
	Q_1	85	95	95	104	104	115	115	147	147	162	162	165	165
	Minimum .	50	25	25	50	50	75	75	75	75	75	75	100	100
No. of Cities 40	No. Cases .	9	38	38	39	40	40	40	40	40	40	40	39	39
30,000–100,000	Maximum	150	450	450	560	560	495	495	490	490	415	415	415	415
	Q_3	118	141	141	144	144	163	164	203	201	209	209	211	211
	Median ...	103	117	117	121	121	145	145	155	155	170	168	171	171
	Q_1	53	74	73	78	90	120	120	139	139	144	144	147	147
	Minimum .	10	10	10	20	20	35	35	45	45	45	45	45	45
No. of Cities 74	No. Cases .	9	66	66	70	70	73	73	74	74	74	74	74	74
10,000–30,000	Maximum	150	325	325	300	300	300	300	300	300	360	360	360	360
	Q_3	78	126	127	141	140	158	158	208	208	215	215	219	219
	Median ...	68	104	105	113	113	134	133	157	157	178	178	202	202
	Q_1	55	66	67	78	79	111	110	139	140	144	144	147	146
	Minimum .	15	15	15	35	35	60	60	60	60	60	60	60	60
No. of Cities 108	No. Cases .	10	97	98	104	104	107	108	108	108	108	108	108	108
5,000–10,000	Maximum	200	200	200	200	300	240	240	250	250	250	250	240	240
	Q_3	108	115	114	136	137	159	159	178	178	208	207	208	209
	Median ...	70	77	75	109	108	135	134	150	151	158	156	156	158
	Q_1	48	60	60	73	73	103	102	124	122	136	135	141	141
	Minimum .	18	20	20	40	40	50	50	75	75	75	75	75	75
No. of Cities 75	No. Cases .	15	67	67	72	72	74	74	75	75	75	75	75	75
2,500–5,000	Maximum	200	350	350	325	325	300	300	405	405	250	300	300	300
	Q_3	115	117	114	129	131	152	146	169	170	205	204	207	207
	Median ...	90	78	76	105	105	124	131	148	147	159	159	165	162
	Q_1	65	57	58	66	65	107	108	129	125	140	140	144	144
	Minimum .	25	10	10	20	20	30	30	60	60	60	60	60	60
No. of Cities 96	No. Cases .	6	73	78	86	88	96	96	96	96	96	96	96	96
Less than 2,500 ...	Maximum		150	150	200	200	300	300	360	360	300	300	290	290
	Q_3		110	107	128	133	174	171	174	174	208	210	213	213
	Median ...	35	72	71	95	95	145	143	142	142	156	156	157	157
	Q_1		55	55	68	68	104	106	111	113	118	119	118	118
	Minimum .		25	25	30	30	55	55	65	65	65	65	75	50
No. of Cities 51	No. Cases .	1	48	48	51	51	51	51	50	50	51	51	51	51

A study of the range of the middle 50 per cent, together with the maximum, minimum, and median amounts of time allotted to language as presented in Table 17C, reveals for each half-grade a wide variation of practice within each population group. Chart 7 shows this variation in graphic form for cities having a population of from 10,000 to 30,000. The least amount of variability is found in the group composed of communities of less than 2,500.

The study of language forms an important part of the kindergarten curriculum. The amount of time given to this subject in the kindergarten varies from 10 to 200 minutes per week. The median practice among cities of the two largest population groups is to allot approximately 20 minutes a day to language.

Penmanship

(See Tables 18A, B, and C; also Chart 8.)

All cities include penmanship in the curriculum of at least some grades of the elementary schools. On an average, 5.3 per cent, or a little more than one-twentieth, of all the time of the elementary grades is spent in learning to write, and some school systems devote as much as 10 per cent of their time to this subject. That there is a wide variation in the time allotted to penmanship is shown by the fact that some cities allot 12 times as many minutes per week in grades 1–6 as others. The least amount of variation is found in cities of from 5,000 to 10,000 and the greatest in cities of 30,000 to 100,000. Even among the largest cities the ratio of the maximum time allotment to the minimum is 3 to 1.

It should be noted that although a number of schools omit instruction in penmanship from the first grade, a few schools include practice in writing in the kindergarten. The amount of time given in the kindergarten ranges from 5 minutes a day to more than 20 minutes.

The results of scientific investigations indicate that not more than 15 minutes a day should be used for practice in penmanship. In a study of handwriting in 56 cities, Dr. Freeman [5] found that there was no close correspondence between amount of time spent and efficiency in penmanship. He points out that "of the two cities which spend on the average only 45 minutes per week,

[5] Freeman, Frank N. "Handwriting," *National Society for the Study of Education, Fourteenth Yearbook*, Part I, 1915, Chapter V.

one has eleventh rank and the other twenty-sixth; while two of the cities which spend an average of 95 minutes have the rank of forty-three and forty-four, very nearly at the bottom of the list." In his comparison of the amounts of time used by the cities which compose the upper half in efficiency with those which make up the lower half, his findings show that "the 23 cities of the upper half spend 73.4 minutes per week, and the 23 cities of the lower half, 73.3 minutes."

In a chapter on "Handwriting"[6] in the *Sixteenth Yearbook of the National Society for the Study of Education,* Freeman calls attention to an experiment which shows that "pupils who spent 50 minutes per week made as much gain as those who spent twice as much time." Finally, as a result of statistical and experimental evidence, Dr. Freeman reached the conclusion, as printed in the *Eighteenth Yearbook,*[7] that "ten to fifteen minutes a day is probably the best length of practice period."

How does present-day practice in time allotment compare with Dr. Freeman's findings as to amount of time necessary for instruction in penmanship? A glance at Table 18C will show that in practically all grades in all population groups the median time allotment ranges between 75 and 80 minutes per week, or at least 15 minutes per day. This means that more than half of our cities are allotting more time than is necessary to instruction in writing. A number of schools allot as much as 30 minutes a day to penmanship, while the maximum reported in any grade is 42 minutes a day in the first grade. Twenty-five per cent of all cities of from 30,000 to 100,000 allot more than 20 minutes in all grades. The same is true of cities of from 2,500 to 5,000. With the exception of the largest population group, at least 25 per cent of all cities allot 20 or more minutes a day to penmanship in each of grades 3 to 6. This is 33⅓ per cent more time than is necessary according to the upper limit of 15 minutes set by Dr. Freeman, and 100 per cent more time than necessary according to the lower limit of 10 minutes per day. The burden of proof rests with all cities which are giving more than 15 minutes a day to penmanship, to justify such an expenditure of time.

[6] Freeman, Frank N. "Handwriting," *National Society for the Study of Education, Sixteenth Yearbook,* Part I, 1917, Chapter IV.

[7] Freeman, Frank N. "Principles of Method in Teaching Writing, as Derived from Scientific Investigation," *National Society for the Study of Education, Eighteenth Yearbook,* Part II, 1919, Chapter I.

TABLE 18A

PENMANSHIP

Total Number of Minutes per Week Allotted to Penmanship in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Penmanship					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	484	5.3	444	75	900	491	450	553
100,000 and over ..	40	447	4.9	40	215	600	461	390	525
30,000–100,000	74	491	5.4	74	115	725	507	440	573
10,000–30,000	108	484	5.4	108	180	650	485	453	537
5,000–10,000	75	484	5.4	75	285	625	491	455	544
2,500–5,000	96	497	5.4	96	140	900	503	456	575
Less than 2,500 ...	51	472	5.1	51	75	625	490	452	547

TABLE 18B

PENMANSHIP

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Penmanship in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	74	5.5	80	5.6	84	5.5	85	5.4	82	5.1	79	4.9	484	5.3
100,000 and over	40	76	5.3	77	5.1	76	4.9	78	5.0	73	4.6	67	4.4	447	4.9
30,000–100,000 ..	74	72	5.3	82	5.6	86	5.6	87	5.5	82	5.1	82	5.1	491	5.4
10,000–30,000 ...	108	71	5.3	78	5.5	84	5.6	86	5.5	85	5.3	80	5.0	484	5.4
5,000–10,000	75	74	5.6	80	5.7	82	5.5	83	5.4	83	5.2	82	5.1	484	5.4
2,500–5,000	96	76	5.7	84	5.9	86	5.6	86	5.4	83	5.1	82	5.0	497	5.4
Less than 2,500 .	51	75	5.7	72	5.1	84	5.4	85	5.2	81	4.8	75	4.4	472	5.1

TABLE 18C

PENMANSHIP

NUMBER OF MINUTES PER WEEK ALLOTTED TO PENMANSHIP IN EACH HALF-GRADE BY THOSE CITIES WHICH REPORT DEFINITE TIME ASSIGNMENTS FOR THE SUBJECT

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		150	150	125	125	100	100	100	100	100	100	100	100
	Q_3		106	104	83	80	85	85	97	97	80	80	79	79
	Median ...		78	76	75	75	76	76	77	77	74	74	73	73
	Q_1		71	65	71	71	71	71	72	72	67	67	65	65
	Minimum .		30	30	35	35	35	35	35	35	35	35	35	35
No. of Cities 40	No. Cases .		34	38	39	40	40	40	40	40	40	40	38	38
30,000–100,000	Maximum		160	150	150	150	175	150	150	150	150	150	150	150
	Q_3		104	103	105	105	105	105	105	105	103	103	103	103
	Median ...		77	76	78	78	79	79	80	80	78	78	78	78
	Q_1		70	66	72	72	74	74	74	74	73	73	73	73
	Minimum .		15	15	15	15	20	20	20	20	20	20	20	20
No. of Cities 74	No. Cases .		65	69	73	73	74	74	74	74	74	74	72	72
10,000–30,000	Maximum		150	150	125	125	100	100	145	145	150	120	125	125
	Q_3		101	89	80	83	100	100	104	104	103	103	101	101
	Median ...	55	76	76	76	76	78	78	79	79	79	79	77	77
	Q_1		71	71	72	72	74	74	74	74	74	74	72	72
	Minimum .		30	30	30	30	30	30	30	30	30	30	30	30
No. of Cities 108	No. Cases .	1	98	101	108	108	108	108	108	108	108	108	108	108
5,000–10,000	Maximum		150	150	150	150	150	150	125	100	100	100	100	100
	Q_3		80	85	84	88	99	101	104	100	100	100	100	100
	Median ...	25	76	76	76	76	77	78	84	85	80	80	79	79
	Q_1		71	71	72	73	73	73	74	74	73	73	73	73
	Minimum .		45	45	50	50	50	30	40	40	40	45	45	45
No. of Cities 75	No. Cases .	1	70	72	75	75	75	75	75	75	75	75	75	75
2,500–5,000	Maximum		175	175	150	150	150	150	150	150	150	150	150	150
	Q_3		105	104	104	104	106	106	106	105	104	104	104	104
	Median ...	105	78	78	78	78	90	95	80	80	78	79	80	79
	Q_1		72	72	73	72	73	74	73	73	72	72	72	71
	Minimum .		15	15	20	20	20	20	20	20	38	38	40	40
No. of Cities 96	No. Cases .	2	87	90	96	96	96	96	96	96	96	96	95	95
Less than 2,500 ...	Maximum		210	210	150	150	150	150	150	150	200	200	150	150
	Q_3		80	88	80	80	105	105	106	106	104	103	101	101
	Median ...	40	74	74	76	76	80	79	95	95	78	77	76	76
	Q_1		58	58	71	71	73	73	73	73	71	71	66	66
	Minimum .		25	25	25	25	40	40	40	40	40	40	40	40
No. of Cities 51	No. Cases .	1	42	49	48	48	50	50	50	50	50	50	50	50

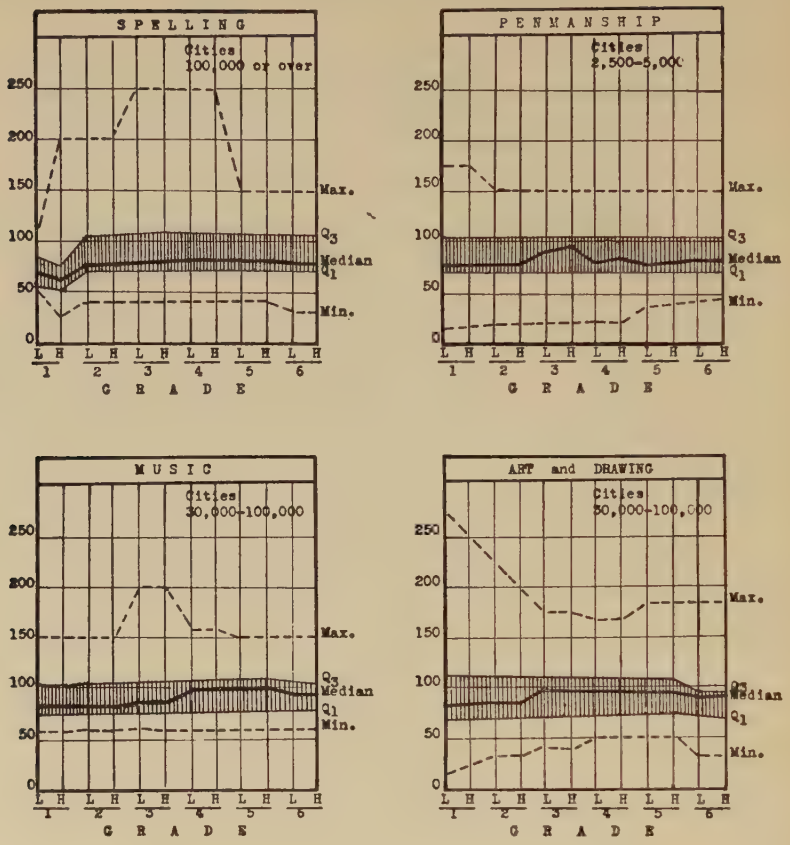

CHART 8

VARIABILITY IN TIME ALLOTMENTS FOR SPELLING, PENMANSHIP, MUSIC, AND ART AND DRAWING, 1926

Showing the Maximum-Minimum Range, the Range of the Middle 50 Per Cent, and the Median Number of Minutes per Week Allotted in Each Half-Grade in Cities of the Indicated Population Groups

Spelling

(See Tables 19A, B, and C; also Chart 8.)

Spelling was one of the first subjects upon which the spotlight of modern scientific investigation was turned. One of the earliest investigations was that of Dr. J. M. Rice, who in 1897 tested the spelling ability of 33,000 pupils and concluded that more than 15 minutes per day devoted to spelling was absolutely wasted.

In referring to this and other investigations in a discussion of "Principles of Method in Teaching Spelling as Derived from Scientific Investigation," Horn [8] makes the following statement relative to the amount of time necessary for instruction in spelling:

> The earlier studies by Rice and Cornman and the various surveys, especially those of Oakland, California, the recent measurements in New York City, and the studies by Theisen have shown rather uniformly that schools with large time allotments have not secured proportionately superior results and in many cases have not secured results which were superior in any degree. The amount of time required depends somewhat upon the method, but it should certainly not exceed seventy-five minutes per week. This allotment should provide for both study and recitation.

Horn's conclusion on the optimum daily time allotment for spelling which he formulated as one of his principles of method is as follows:

> *If spelling is taught daily, the period should not be more than fifteen minutes in length.*

How does practice in 1926 compare with this optimum allotment? A study of Table 19C shows that in all but the first grade in each population group the median time allotment is greater than 75 minutes per week, varying from 76 to 105 minutes. This means that more than one-half of our cities allot time in excess of the amount which has been found to give satisfactory results in spelling achievement. In fact, not more than one-third of all the school systems included in this investigation keep their time allotments for spelling below the upper limit of 75 minutes per week as set by Horn. One-fourth of all cities studied allot at least 33⅓ per cent more time than is necessary according to this standard. The maximum amount of time given to spelling in any grade is 250 minutes per week, in grades 3 and 4 by a city of the largest population group, and in grade 2 by a city of the 2,500 to 5,000 population group. Evidently a great many cities are devoting much more time to spelling than can ordinarily be used profitably. Cities whose time allotments exceed the median in any grade and especially those exceeding the 75 percentile allotments should check their achievement in spell-

[8] Horn, Ernest. "Principles of Method in Teaching Spelling as Derived from Scientific Investigation." *National Society for the Study of Education, Eighteenth Yearbook*, Part II, p. 59.

TABLE 19A

SPELLING

Total Number of Minutes per Week Allotted to Spelling in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Spelling					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	485	5.3	441	25	1,200	490	406	574
100,000 and over ..	40	448	4.9	40	210	1,200	430	382	500
30,000–100,000	74	472	5.1	73	320	900	488	416	549
10,000–30,000	108	505	5.6	107	250	975	501	420	597
5,000–10,000	75	464	5.2	74	250	762	461	434	544
2,500–5,000	96	493	5.4	96	25	950	512	400	600
Less than 2,500 ...	51	520	5.6	51	150	1,025	521	397	621

TABLE 19B

SPELLING

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Spelling in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	31	2.3	82	5.7	94	6.1	96	6.1	93	5.8	89	5.5	485	5.3
100,000 and over	40	24	1.7	81	5.4	90	5.8	90	5.8	84	5 3	79	5.2	448	4.9
30,000–100,000 ..	74	31	2.3	82	5.6	92	6.0	92	5.8	89	5.6	86	5.3	472	5.1
10,000–30,000 ...	108	39	2.9	86	6.1	99	6.6	98	6.2	94	5.9	89	5.6	505	5.6
5,000–10,000	75	22	1.6	79	5.6	91	6.1	93	6.0	90	5.6	89	5.6	464	5.2
2,500–5,000	96	29	2.2	82	5.7	94	6.2	96	6.1	98	6.0	94	5.7	493	5.4
Less than 2,500 .	51	38	2.9	83	5.9	99	6.3	104	6.3	101	6.0	95	5.6	520	5.6

TABLE 19C

SPELLING

Number of Minutes per Week Allotted to Spelling in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		100	200	200	200	250	250	250	250	150	150	150	150
	Q_3		85	71	103	103	105	105	105	105	104	104	103	103
	Median ...		65	59	76	76	78	78	80	80	80	80	78	78
	Q_1		56	53	70	70	72	72	74	74	73	73	72	72
	Minimum .		50	25	40	40	40	40	40	40	40	40	30	30
No. of Cities 40	No. Cases .		10	19	40	40	40	40	40	40	40	40	39	39
30,000–100,000	Maximum		125	125	175	175	200	200	150	150	150	150	150	150
	Q_3		77	76	105	104	107	107	108	108	107	106	105	105
	Median ...		60	59	78	78	102	102	102	102	101	100	88	85
	Q_1		53	53	72	72	77	77	77	76	76	76	75	75
	Minimum .		20	10	25	25	50	50	50	50	60	60	60	60
No. of Cities 74	No. Cases .		24	41	72	71	73	73	73	73	73	73	73	73
10,000–30,000	Maximum		175	225	200	225	225	225	200	200	180	180	150	150
	Q_3		102	89	107	107	120	123	122	121	108	108	107	107
	Median ...		75	74	79	79	103	103	104	104	102	102	83	85
	Q_1		57	57	71	71	75	75	76	76	76	76	73	73
	Minimum .		50	50	20	20	50	50	50	50	50	50	30	30
No. of Cities 108	No. Cases .		48	61	106	106	107	107	107	107	107	107	107	107
5,000–10,000	Maximum		100	100	150	150	175	175	150	150	175	175	150	150
	Q_3		71	74	104	105	108	108	108	109	106	106	106	106
	Median ...		57	59	78	78	79	79	100	101	88	88	90	88
	Q_1		53	54	72	71	73	73	75	75	75	75	75	74
	Minimum .		25	25	25	25	25	45	35	35	40	40	40	40
No. of Cities 75	No. Cases .		25	35	69	70	74	74	74	74	74	74	74	74
2,500–5,000	Maximum		100	120	250	250	200	200	200	200	175	175	175	175
	Q_3		78	77	104	106	108	108	109	109	120	120	109	108
	Median ...	75	59	60	79	78	103	103	103	103	104	104	103	102
	Q_1		53	53	71	70	75	74	76	76	77	77	76	76
	Minimum .		20	20	25	25	25	25	30	30	40	40	45	45
No. of Cities 96	No. Cases .	1	39	52	90	93	95	95	95	95	95	95	95	95
Less than 2,500 ...	Maximum		125	125	150	150	225	225	225	225	200	200	200	200
	Q_3		80	79	106	106	128	123	126	126	126	127	123	123
	Median ...	15	60	70	77	77	80	80	102	102	104	105	102	102
	Q_1		52	54	68	68	72	72	74	73	74	74	73	73
	Minimum..		15	15	25	25	25	25	25	25	25	25	25	25
No. of Cities 51	No. Cases .	1	29	30	50	50	51	51	51	51	51	51	50	50

ing in order to determine whether the results justify the excess allotments.

The great variation in time allotments for spelling in each half-grade is shown graphically in Chart 8 for cities having a population of 100,000 or over.

All but three of the 444 cities report specific time allotments to spelling. One of these three, a city of the 30,000 to 100,000 group, reports spelling as included with English; one of the 10,000 to 30,000 group includes it with reading; and one city of the 5,000 to 10,000 group, which fails to report spelling either as receiving definite time allotments or as taught in connection with other subjects, evidently depends on the incidental teaching of spelling. One community reports time allotted to this subject in the high second grade only.

There is a tendency for larger cities to allot less time to spelling than the smaller communities. With one exception, the median amount of time increases regularly from 430 minutes per week in all grades for cities of 100,000 or over, to 521 minutes per week for communities of less than 2,500 population. The one exception is that of cities of the 5,000 to 10,000 group, the median for which is less than that for either of the two next larger groups. The same relationship between size of population and time allotment maintains for the first and third quartile allotments as well as for the median.

A study of Table 19C will show that there is a tendency for median time allotments for spelling to increase from grade 1 until the peak of the time allotment curve is reached in grade 3, 4, or 5, depending upon the population group.

As pointed out elsewhere in this chapter, more than 60 per cent of all cities omit spelling from the low first grade, and slightly more than half offer it in the high first. In cities of 100,000 or over, only one-fourth give spelling in the low first grade and less than half include it in the high first. Two kindergartens report spelling as part of their curriculum; the allotment in one of these is 15 minutes per week and in the other is 75 minutes.

Geography

(See Tables 20A, B, and C; also Chart 9.)

Time allotments for geography were reported by 435 out of 444 cities. The other nine cities report that they teach this

subject, but include it in combination with other subjects as a part of social science.

Apparently size of population has no definite influence on the amount of time given to the teaching of geography. The median total allotment in grades 1–6 for 435 cities is 531 minutes per

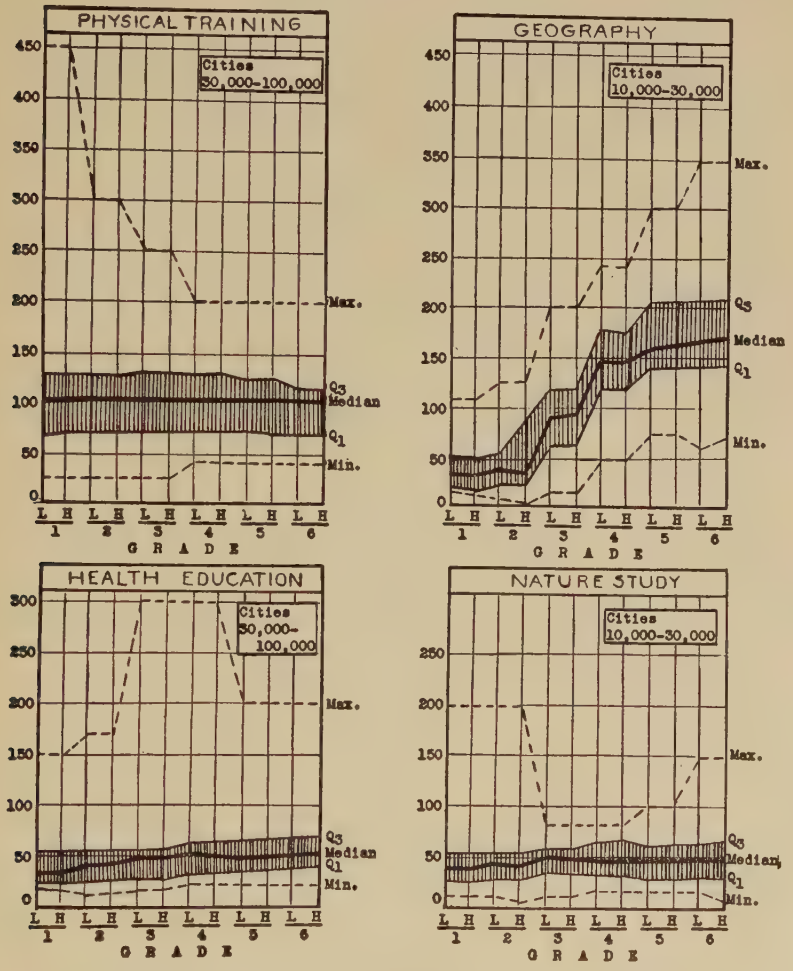

CHART 9

VARIABILITY IN TIME ALLOTMENTS FOR PHYSICAL TRAINING, HEALTH EDUCATION, GEOGRAPHY, AND NATURE STUDY OR ELEMENTARY SCIENCE, 1926

Showing Maximum-Minimum Range, the Range of the Middle 50 Per Cent, and the Median Number of Minutes per Week in Each Half-Grade

TABLE 20A

GEOGRAPHY

Total Number of Minutes per Week Allotted to Geography in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Geography					
				No. of Cities Which Report Subject	Range		Median No of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	526	5.8	435	200	1,070	531	432	644
100,000 and over ..	40	521	5.7	39	215	905	525	414	662
30,000–100,000	74	507	5.5	74	235	1,020	520	429	632
10,000–30,000	108	536	5.9	105	240	930	552	459	664
5,000–10,000	75	531	5.9	75	285	875	517	432	640
2,500–5,000	96	519	5.7	94	200	1,025	530	437	625
Less than 2,500 ...	51	540	5.8	51	270	1,070	555	368	671

TABLE 20B

GEOGRAPHY

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Geography in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	4	0.3	7	0.5	58	3.8	133	8.4	160	9.9	164	10.2	526	5.8
100,000 and over	40	6	0.4	10	0.7	58	3.8	127	8.1	160	10.2	160	10.5	521	5.7
30,000–100,000 ..	74	5	0.4	8	0.5	59	3.8	124	7.8	152	9.5	159	9.9	507	5.5
10,000–30,000 ...	108	4	0.3	8	0.6	55	3.7	140	8.9	162	10.1	167	10.5	536	5.9
5,000–10,000	75	2	0.2	5	0.4	55	3.7	132	8.5	168	10.5	169	10.6	531	5.9
2,500–5,000	96	3	0.2	5	0.3	60	3.9	128	8.1	159	9.8	164	10.0	519	5.7
Less than 2,500 .	51	4	0.3	7	0.5	68	4.3	145	8.8	156	9.3	160	9.4	540	5.8

TABLE 20C

GEOGRAPHY

Number of Minutes per Week Allotted to Geography in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		50	50	75	75	175	175	300	300	295	295	300	300
	Q_3		37	37	39	39	103	102	156	156	201	204	206	208
	Median ...		31	31	33	33	78	77	132	133	155	157	158	160
	Q_1		26	26	26	26	65	65	110	113	135	135	141	141
	Minimum .		20	20	20	20	25	25	60	60	90	90	75	75
No. of Cities 40	No. Cases .		8	8	10	10	29	30	38	38	39	39	38	38
30,000–100,000	Maximum		75	75	100	100	200	200	250	250	250	250	250	250
	Q_3		54	54	69	69	114	113	157	158	198	198	208	209
	Median ...		44	44	53	53	74	75	141	141	156	156	159	158
	Q_1		33	33	35	35	60	61	110	111	140	138	141	139
	Minimum .		20	20	10	10	15	15	50	50	80	80	80	80
No. of Cities 74	No. Cases .		10	10	13	13	52	54	67	63	69	69	70	70
10,000–30,000	Maximum		110	110	125	125	200	200	240	240	300	300	350	350
	Q_3		53	50	55	54	118	117	179	175	207	207	210	210
	Median ...		33	30	36	34	88	90	144	143	158	160	163	165
	Q_1		18	15	24	23	63	62	118	119	139	140	142	143
	Minimum .		15	13	10	5	15	15	50	50	75	75	60	70
No. of Cities 108	No. Cases .		11	12	20	21	67	69	105	105	105	105	105	105
5,000–10,000	Maximum		40	40	100	100	200	200	275	250	275	275	300	300
	Q_3		50	45	90	80	103	100	159	158	210	210	212	211
	Median ...	10	40	20	50	40	68	67	131	131	159	158	167	168
	Q_1		15	10	30	27	47	47	107	108	142	141	141	142
	Minimum .		13	13	6	6	15	15	30	50	100	50	80	80
No. of Cities 75	No. Cases .	1	6	6	8	8	56	56	74	74	75	75	74	75
2,500–5,000	Maximum		50	50	75	75	200	200	300	300	300	300	300	300
	Q_3		34	38	53	48	111	113	166	166	206	206	208	209
	Median ...		28	28	37	35	70	73	131	132	157	157	161	161
	Q_1		17	18	27	26	47	52	107	109	136	139	143	142
	Minimum .		10	10	15	15	15	15	30	30	50	50	75	75
No. of Cities 96	No. Cases .		10	11	14	14	72	75	93	93	94	94	94	93
Less than 2,500 ...	Maximum		75	75	75	75	250	250	275	275	280	280	300	300
	Q_3		50	50	53	53	129	124	206	206	214	217	206	208
	Median ...	20	35	35	40	40	104	102	143	143	146	146	152	153
	Q_1		28	28	30	30	69	70	108	108	115	115	124	124
	Minimum .		20	20	25	25	20	20	50	50	50	50	60	60
No. of Cities 51	No. Cases .	1	6	6	8	8	33	36	50	50	51	51	51	51

TABLE 21A

HISTORY

Total Number of Minutes per Week Allotted to History in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to History					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	309	3.4	418	42	960	324	212	432
100,000 and over ..	40	311	3.4	36	70	900	321	220	425
30,000–100,000	74	288	3.1	67	100	675	303	217	421
10,000–30,000	108	275	3.0	99	42	750	302	187	410
5,000–10,000	75	324	3.6	73	50	775	332	221	429
2,500–5,000	96	330	3.6	92	45	770	350	230	458
Less than 2,500 ...	51	349	3.7	51	80	960	359	217	435

TABLE 21B

HISTORY

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to History in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	8	0.6	11	0.8	26	1.7	57	3.6	94	5.8	113	7.0	309	3.4
100,000 and over	40	17	1.2	16	1.1	35	2.3	58	3.7	88	5.6	97	6.4	311	3.4
30,000–100,000 ..	74	6	0.4	14	1.0	26	1.7	57	3.6	84	5.3	101	6.3	288	3.1
10,000–30,000 ...	108	5	0.4	7	0.5	21	1.4	53	3.4	87	5.4	102	6.4	275	3.0
5,000–10,000	75	8	0.6	10	0.7	24	1.6	57	3.7	100	6.3	122	7.6	321	3.6
2,500–5,000	96	8	0.6	11	0.8	26	1.7	58	3.7	102	6.3	125	7.6	330	3.6
Less than 2,500 .	51	10	0.8	13	0.9	30	1.9	59	3.6	105	6.2	132	7.8	349	3.7

TABLE 21C

HISTORY

Number of Minutes per Week Allotted to History in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		100	100	100	100	175	175	175	175	200	200	200	200
	Q_3		57	57	56	56	72	72	98	102	128	121	136	136
	Median ...		42	42	46	46	55	56	75	78	97	96	113	113
	Q_1		29	29	33	33	41	42	54	58	70	71	88	88
	Minimum .		15	15	15	15	15	15	30	30	30	30	30	30
No. of Cities 40	No. Cases .		15	15	14	14	22	23	30	30	34	35	34	34
30,000–100,000	Maximum		50	50	100	100	150	150	150	150	200	200	210	205
	Q_3		43	44	57	60	68	73	111	111	132	133	147	147
	Median ...		31	33	40	43	52	54	85	85	103	105	119	119
	Q_1		21	23	28	29	35	36	59	59	72	71	93	93
	Minimum .		3	3	9	15	10	10	25	25	30	30	30	30
No. of Cities 74	No. Cases .		17	16	24	24	35	36	51	51	62	63	66	65
10,000–30,000	Maximum		60	60	60	60	150	150	200	200	225	205	215	225
	Q_3		48	48	53	53	68	69	120	119	139	139	154	155
	Median ...	25	34	34	40	40	53	53	101	100	109	109	126	128
	Q_1		23	23	26	26	41	41	61	61	72	74	88	90
	Minimum .		10	10	15	15	15	15	20	20	30	30	40	40
No. of Cities 108	No. Cases .	1	16	16	20	20	43	43	68	66	90	88	94	92
5,000–10,000	Maximum		75	75	100	100	120	120	190	190	200	200	205	200
	Q_3		48	45	53	53	67	62	115	113	147	147	160	160
	Median . .	13	32	28	37	35	49	48	78	78	119	118	134	133
	Q_1		16	14	20	19	33	31	55	55	81	85	107	106
	Minimum .		13	13	8	8	15	15	15	25	50	50	50	50
No. of Cities 75	No. Cases .	1	19	19	20	19	36	38	53	53	65	66	72	73
2,500–5,000	Maximum		100	100	100	100	150	150	200	200	200	200	225	225
	Q_3		39	45	56	56	74	76	122	124	150	150	163	159
	Median ...		27	29	38	39	52	61	90	94	121	119	141	137
	Q_1		14	16	25	36	35	35	58	55	86	79	109	108
	Minimum .		5	5	10	15	25	25	5	5	15	15	40	40
No. of Cities 96	No. Cases .		22	22	26	27	41	43	63	65	85	85	90	91
Less than 2,500 ...	Maximum	30	240	240	240	240	240	240	210	210	275	275	225	225
	Q_3		55	55	65	65	108	109	138	137	151	153	173	174
	Median ...	25	45	45	50	50	57	59	102	103	123	121	135	134
	Q_1		33	33	37	37	43	44	66	67	78	75	109	109
	Minimum .	20	25	25	10	10	10	10	10	10	10	10	35	35
No. of Cities 51	No. Cases .	2	8	8	10	10	20	21	29	30	45	45	50	49

week. The medians for the six population groups range between 517 and 555 minutes.

Practically all cities agree that geography should be taught in grades 4 to 6, and it is offered in grade 3 also by approximately 70 per cent of the entire group. There is a tendency on the part of a limited number of cities to include it in the first two grades as well.

The median amount of time given to geography increases regularly from the first to the sixth grade. The time distribution curve rises sharply between the second and fourth grades and then tends to flatten out with only a slight increase between grades 5 and 6. This tendency, which is true for all population groups, is shown graphically for cities of from 10,000 to 30,000 in Chart 9. The chart also shows the wide range between the minimum and maximum allotments for each grade.

History

(See Tables 21A, B, and C; also Chart 7.)

Approximately one-thirtieth of the time which a child spends in the elementary grades is given to the study of history. This is only about three-fifths as much time as he spends in learning geography. Of the 444 cities whose time schedules were analyzed, 418 show definite time allotments for history, while 11 report that they include it with other subjects. Fifteen cities do not report this subject as a part of the curriculum of the elementary grades.

There is a noticeable tendency for school systems in the smaller population groups to give a greater amount of time to instruction in history than is given by cities of the larger groups. Communities of less than 2,500 population give about 20 per cent more time than cities of either the 10,000 to 30,000 group, or those having a population of from 30,000 to 100,000.

The number of cities which allot time to history increases regularly from the first to the sixth grade. As was pointed out in a previous chapter, there has been a tendency in recent years to push history further down into the grades than ever before. More than one-fifth of the cities studied report time allotments for history in the first grade; on the other hand, 6 per cent of the entire group offer it in the sixth grade only. History seems to be firmly established as a part of the curriculum of grades 5 and 6

in a large majority of the school systems and has been accepted in grade 4 by two-thirds of the cities. As yet less than 50 per cent of the schools have allotted time to history in grade 3.

The median amount of time given to history by those cities which offer it increases continually from grade 1 to grade 6. The rate of increase is gradual from grade 1 to grade 3, very marked between grades 3 and 5, and somewhat less between grades 5 and 6. The total increase in time from the first to the sixth grade is more evenly distributed in the case of the largest population group than for any other. The median time for cities of 100,000 or over is larger in grades 1 and 2 than for any group except communities of less than 2,500, and is smaller in grades 4 to 6 than for any other population group.

Chart 7 exhibits the maximum-minimum range, the range of the middle 50 per cent, and the median time allotments in the several grades for history in cities of from 10,000 to 30,000.

Citizenship and Civics

(See Tables 22A, B, and C; also Chart 7.)

Only 1 per cent of the total time in grades 1–6 is given to citizenship and civics; this is the average for 444 cities. Of this group only 233 cities report time allotted specifically for this purpose. In addition, the authorities in 49 cities report that citizenship and civics is included in history; 5, in social science; 3, in "other subjects"; and in 4 cities it is "taught incidentally." One hundred fifty cities of the entire group apparently do not include citizenship and civics as a part of the curriculum of grades 1–6.

Among those that allot time to citizenship and civics, the range of total time is very wide. The maximum total time in grades 1–6 is more than 100 times as great as the minimum. The median time allotment for the 233 cities is 154 minutes per week in all grades, and the range of the middle 50 per cent is from 83 to 245 minutes. Within the middle 50 per cent of the group some schools allot three times as many hours for instruction in citizenship and civics as do others. A greater percentage of small than of large communities report time allotments. In fact the percentage of cities which allot time to this subject decreases regularly as the size of city increases, from 63.5 per cent in the 2,500 to 5,000 population group, to 35 per cent in the largest group which in-

TABLE 22A

CITIZENSHIP AND CIVICS

Total Number of Minutes per Week Allotted to Citizenship and Civics in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Citizenship and Civics					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	93	1.0	233	7	750	154	83	245
100,000 and over	40	88	1.0	14	90	450	240	205	325
30,000–100,000	74	75	0.8	31	30	430	172	98	232
10,000–30,000	108	86	1.0	57	15	700	136	74	234
5,000–10,000	75	97	1.1	42	12.5	500	159	84	237
2,500–5,000	96	118	1.3	61	7	750	147	76	279
Less than 2,500	51	77	0.8	28	20	370	129	79	190

TABLE 22B

CITIZENSHIP AND CIVICS

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Citizenship and Civics in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	11	0.8	12	0.8	14	0.9	16	1.0	19	1.2	21	1.3	93	1.0
100,000 and over	40	11	0.8	11	0.7	16	1.0	17	1.1	17	1.1	16	1.0	88	1.0
30,000–100,000	74	9	0.7	10	0.7	11	0.7	13	0.8	15	0.9	17	1.0	75	0.8
10,000–30,000	108	13	1.0	15	1.1	14	0.9	14	0.9	14	0.9	16	1.0	86	1.0
5,000–10,000	75	10	0.8	11	0.8	15	1.0	16	1.0	22	1.4	23	1.4	97	1.1
2,500–5,000	96	12	0.9	13	0.9	17	1.1	22	1.4	26	1.6	28	1.7	118	1.3
Less than 2,500	51	7	0.5	7	0.5	9	0.6	13	0.8	17	1.0	24	1.4	77	0.8

TABLE 22C

CITIZENSHIP AND CIVICS

Number of Minutes per Week Allotted to Citizenship and Civics in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		75	75	75	75	75	75	75	75	75	75	75	75
	Q_3		58	58	55	55	65	65	73	73	68	68	69	69
	Median ...	25	45	45	30	30	50	50	50	50	53	53	53	53
	Q_1		24	24	24	24	28	28	35	35	38	38	36	36
	Minimum .		15	15	15	15	15	15	15	15	15	15	15	15
No. of Cities 40	No. Cases .	1	11	11	12	12	14	14	14	14	14	14	13	13
30,000–100,000	Maximum	30	75	75	120	120	120	120	80	80	90	100	125	125
	Q_3		46	46	54	56	55	55	61	58	56	58	71	58
	Median ...	28	33	34	34	35	38	35	38	38	38	40	42	41
	Q_1		24	26	25	25	27	26	26	26	27	27	30	30
	Minimum .	25	10	10	10	10	25	25	25	25	18	18	20	20
No. of Cities 74	No. Cases .	3	19	19	19	19	20	20	23	23	28	28	27	27
10,000–30,000	Maximum	50	175	175	175	175	150	150	100	100	75	75	120	120
	Q_3	30	55	54	55	55	56	56	52	52	50	50	54	54
	Median ...	25	32	30	36	36	36	37	37	37	35	35	37	36
	Q_1	21	20	20	23	23	23	24	25	27	28	28	26	25
	Minimum .	15	10	10	10	10	15	15	9	9	15	15	15	15
No. of Cities 108	No. Cases .	9	38	38	39	40	39	39	41	41	43	43	47	47
5,000–10,000	Maximum	50	100	100	100	100	100	100	100	100	150	150	150	150
	Q_3	28	53	52	49	49	53	56	58	58	70	70	62	61
	Median ...	22	30	28	29	28	30	33	38	38	42	42	44	45
	Q_1	16	23	21	22	21	24	24	26	27	31	31	33	33
	Minimum .	10	10	10	10	10	15	10	5	5	5	5	5	5
No. of Cities 75	No. Cases .	7	24	25	25	25	30	30	31	31	32	32	34	35
2,500–5,000	Maximum	50	100	100	100	100	100	100	150	150	150	150	150	150
	Q_3		55	56	57	57	57	57	59	65	69	73	77	76
	Median ...	40	31	36	33	32	39	39	47	47	53	53	54	54
	Q_1		21	24	22	21	26	29	26	27	34	31	37	36
	Minimum .	20	10	10	10	10	10	10	10	10	10	10	10	10
No. of Cities 96	No. Cases .	6	31	29	35	36	37	37	42	42	45	46	44	46
Less than 2,500 ...	Maximum	25	75	75	75	75	50	50	75	75	100	100	150	125
	Q_3		34	34	34	34	38	38	54	54	56	56	76	73
	Median ...		26	26	25	25	28	28	39	39	36	36	52	50
	Q_1		19	19	17	17	22	22	26	26	25	25	30	29
	Minimum .	15	10	10	10	10	10	10	10	10	10	15	20	20
No. of Cities 51	No. Cases .	2	14	14	14	14	16	16	17	17	21	21	23	22

TABLE 23A

NATURE STUDY AND ELEMENTARY SCIENCE

TOTAL NUMBER OF MINUTES PER WEEK ALLOTTED TO NATURE STUDY AND ELEMENTARY SCIENCE IN GRADES 1–6 IN 444 SCHOOL SYSTEMS

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Nature Study and Elementary Science					
				No of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	117	1.3	296	5	720	160	99	245
100,000 and over ..	40	162	1.8	28	70	450	212	150	320
30,000–100,000	74	110	1.2	41	56	470	197	122	284
10,000–30,000	108	107	1.2	66	23	720	150	104	229
5,000–10,000	75	128	1.4	54	15	650	159	94	237
2,500–5,000	96	118	1.3	72	5	540	135	81	239
Less than 2,500 ...	51	99	1.1	35	25	475	141	92	210

TABLE 23B

NATURE STUDY AND ELEMENTARY SCIENCE

AVERAGE NUMBER OF MINUTES PER WEEK BY GRADES, PERCENTAGE OF TIME IN EACH GRADE, AND PERCENTAGE OF TOTAL TIME IN GRADES 1–6 ALLOTTED TO NATURE STUDY AND ELEMENTARY SCIENCE IN 444 SCHOOL SYSTEMS

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	21	1.6	23	1.6	21	1.4	19	1.2	17	1.0	16	1.0	117	1.3
100,000 and over	40	29	2.0	34	2.3	30	1.9	25	1.6	23	1.5	21	1.4	162	1.8
30,000–100,000 ..	74	20	1.5	23	1.6	19	1.2	18	1.1	17	1.1	13	0.8	110	1.2
10,000–30,000 ...	108	19	1.4	22	1.6	20	1.3	16	1.0	14	0.9	16	1.0	107	1.2
5,000–10,000	75	24	1.8	22	1.6	21	1.4	21	1.4	21	1.3	19	1.2	128	1.4
2,500–5,000	96	22	1.7	24	1.7	23	1.5	19	1.2	18	1.1	12	0.7	118	1.3
Less than 2,500 .	51	15	1.1	18	1.3	18	1.1	15	0.9	15	0.9	18	1.1	99	1.1

TABLE 23C

NATURE STUDY AND ELEMENTARY SCIENCE

NUMBER OF MINUTES PER WEEK ALLOTTED TO NATURE STUDY AND ELEMENTARY SCIENCE IN EACH HALF-GRADE BY THOSE CITIES WHICH REPORT DEFINITE TIME ASSIGNMENTS FOR THE SUBJECT

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	50	100	100	100	100	100	100	80	80	75	75	75	75
	Q_3		61	61	67	67	59	59	60	61	56	56	60	60
	Median ..	38	43	43	48	48	44	44	42	43	43	43	43	43
	Q_1		28	28	30	30	33	33	30	32	34	34	33	33
	Minimum .	20	20	20	20	20	20	20	20	20	25	25	25	25
No. of Cities 40	No. Cases .	5	27	27	28	28	27	27	24	23	22	22	20	20
30,000–100,000	Maximum	100	90	90	100	100	100	100	150	150	150	150	75	75
	Q_3	60	57	58	60	60	60	70	60	59	63	63	60	60
	Median . .	55	48	51	55	51	43	43	51	47	51	51	48	49
	Q_1	51	31	31	30	31	27	27	28	27	29	29	31	34
	Minimum .	20	7	7	15	15	10	10	8	8	4	4	15	15
No. of Cities 74	No. Cases .	9	35	36	37	38	32	32	28	28	25	25	21	21
10,000–30,000	Maximum	100	200	200	200	200	80	80	80	80	100	100	150	150
	Q_3	57	55	55	56	56	59	59	63	65	61	62	62	64
	Median ...	50	38	39	41	41	49	48	40	43	43	43	48	47
	Q_1	28	26	26	28	27	32	32	30	30	28	28	32	30
	Minimum .	10	10	10	7	3	10	10	15	15	15	15	17	6
No. of Cities 108	No. Cases .	14	48	47	55	55	49	48	40	39	38	36	37	37
5,000–10,000	Maximum	100	100	100	75	75	75	75	100	100	150	150	150	150
	Q_3	70	57	57	53	53	50	52	53	53	65	63	61	61
	Median ...	50	40	39	36	37	38	37	42	41	47	45	43	43
	Q_1	35	31	31	27	27	27	25	28	26	32	32	31	31
	Minimum	25	10	10	10	10	10	10	15	15	10	10	6	6
No. of Cities 75	No. Cases .	8	42	44	46	45	41	42	39	39	32	32	31	31
2,500–5,000	Maximum	75	100	100	100	130	130	100	100	100	100	100	100	120
	Q_3	57	56	55	55	55	56	56	58	55	63	60	63	65
	Median ...	52	37	36	36	36	43	43	38	37	44	42	38	38
	Q_1	28	23	23	21	21	28	28	27	26	27	26	30	31
	Minimum	20	5	5	10	10	10	15	10	10	15	15	20	20
No. of Cities 96	No. Cases .	10	56	56	59	58	53	53	48	46	40	40	29	30
Less than 2,500 ...	Maximum	20	100	100	150	150	75	75	75	75	100	100	100	100
	Q_3		45	45	39	39	54	54	60	60	65	65	64	64
	Median ...	20	28	28	29	29	30	30	37	37	40	40	53	53
	Q_1		22	22	21	21	24	25	28	28	28	28	33	33
	Minimum .	10	10	10	15	15	15	15	10	10	10	10	15	15
No. of Cities 51	No. Cases .	2	24	24	26	26	25	25	20	20	18	18	19	19

cludes cities with a population of 100,000 or over. However, among those cities which do allot time, with the exception of the 10,000 to 30,000 group, the larger the city, the larger the amount of time given to citizenship and civics. The median amount of time for the smallest group is 129 minutes per week in grades 1–6, as compared with 240 minutes for cities of the largest group.

Table 22C shows the maximum and minimum, the 25 percentile and 75 percentile, together with the median number of minutes per week allotted to citizenship and civics in each half-grade in each of six population groups. These facts are exhibited graphically for the 10,000 to 30,000 population group in Chart 7. A wide range between the maximum and minimum allotments is noticeable in practically all grades in every population group. There is a tendency on the part of the cities of the larger groups, as shown by the median time allotments and the range of the middle 50 per cent, to allot about the same amount of time to citizenship and civics in one grade as in another. In the case of the smaller population groups the tendency is to increase the time allotments from the lower to the upper grades with more or less regularity.

It is significant that citizenship and civics has been carried down into the curriculum of the kindergarten by 28 out of 115 cities reporting kindergarten allotments. The amount of time given to this subject by the kindergartens varies from 10 to 50 minutes per week.

Nature Study or Elementary Science

(See Tables 23A, B, and C; also Chart 9.)

Table 23A shows that 296 out of 444 cities, or two-thirds of the entire group, allot time definitely to nature study or elementary science. Twenty-eight cities, while not reporting specific time allotment, state that nature study or elementary science is taught either incidentally, or in correlation with other subjects; of this group 13 correlate it with geography; 3, with language; 3, with opening exercises; 1, with health education; 1, with social science; 1, with art; 1, with English and drawing; 3, with "other subjects"; and 2 cities state that it is taught incidentally. The median amount of time allotted by 296 cities is 160 minutes per week for all grades combined, or approximately 1.8 per cent of the total time. The average amount of time, considering all of

the 444 cities, is 117 minutes per week, or 1.3 per cent of the total time.

The proportion of cities which offer nature study or elementary science is somewhat greater among smaller population groups than among the larger, if cities of 100,000 or over are excepted. However, the amount of time given by those cities which do allot time to this subject is greatest among cities of the two largest population groups. In general, the larger the city, the greater the amount of time allotted to nature study or elementary science. There is wide variation between maximum and minimum allotments in all groups.

There is no regular trend in the amount of time allotment from grade to grade, except in the smallest population group where the increase is consistent from 28 minutes in the first grade, to 53 minutes in the sixth. Among the other population groups the median time allotment is greatest in the lower grades for some groups, or in the middle or upper grades for others. In the cities of 100,000 or over the median allotment for the various grades ranges only from 42 to 48 minutes with the largest allotment in the second grade. The maximum amount of time given to nature study in any grade is 200 minutes per week in grades 1 and 2 in cities of 10,000 to 30,000 population. The variability in time allotment for this subject among cities of this group is shown graphically in Chart 9.

Time allotments for nature study are reported by more than 40 per cent of the kindergartens. The range of time varies from a minimum of 10 minutes per week to a maximum of 100 minutes. In 4 out of the 6 population groups the median time given to nature study in the kindergarten is greater than the median in any of the elementary grades.

Art and Drawing

(See Tables 24A, B, and C; also Chart 8.)

A definite relationship between size of population group and time allotment is found to exist in the case of art and drawing. In the first place, a greater proportion of the larger than of the smaller cities include art and drawing as a part of the elementary program of studies. The percentage of cities in each population group which allot time for work in art varies from 90.2 per cent

TABLE 24A

ART AND DRAWING

Total Number of Minutes per Week Allotted to Art and Drawing in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Art and Drawing					
				No. Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	433	4.7	428	23	1,095	453	360	546
100,000 and over ..	40	513	5.6	40	180	1,095	494	425	571
30,000–100,000	74	510	5.6	72	60	1,017	489	428	585
10,000–30,000	108	452	5.0	106	75	900	469	373	572
5,000–10,000	75	422	4.7	72	50	900	432	354	520
2,500–5,000	96	403	4.4	92	25	1,020	404	321	525
Less than 2,500 ...	51	286	3.1	46	23	860	328	254	412

TABLE 24B

ART AND DRAWING

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Art and Drawing in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	71	5.3	73	5.1	74	4.8	73	4.6	72	4.5	70	4.3	433	4.7
100,000 and over	40	89	6.3	88	5.9	87	5.6	86	5.5	83	5.3	80	5.2	513	5.6
30,000–100,000 ..	74	81	6.0	85	5.8	88	5.7	87	5.5	86	5.4	83	5.2	510	5.6
10,000–30,000 ...	108	76	5.7	76	5.3	76	5.1	75	4.8	76	4.8	73	4.6	452	5.0
5,000–10,000	75	70	5.2	71	5.0	72	4.8	71	4.6	69	4.3	70	4.4	423	4.7
2,500–5,000	96	62	4.7	69	4.8	70	4.6	69	4.4	67	4.1	66	4.0	403	4.4
Less than 2,500 .	51	48	3.6	47	3.3	54	3.4	45	2.7	47	2.8	45	2.6	286	3.1

TABLE 24C

ART AND DRAWING

Number of Minutes per Week Allotted to Art and Drawing in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	250	275	275	225	225	175	175	175	175	175	175	175	175
	Q_3	203	108	108	108	108	105	105	98	98	97	97	96	96
	Median . .	105	79	79	83	83	83	83	88	90	91	91	88	88
	Q_1	64	71	71	72	72	70	70	69	69	67	67	67	67
	Minimum .	50	30	30	25	25	30	30	30	30	30	30	30	30
No. of Cities 40	No. Cases .	7	40	40	40	40	40	40	40	40	40	40	39	39
30,000–100,000	Maximum	250	275	250	200	200	175	175	160	160	180	180	180	180
	Q_3	79	106	106	106	106	106	106	105	105	103	104	93	93
	Median ...	73	79	79	84	84	93	93	92	92	91	92	88	88
	Q_1	53	67	67	70	70	72	72	75	74	74	75	70	70
	Minimum .	25	15	25	30	30	40	40	50	50	50	50	30	30
No. of Cities 74	No. Cases .	5	68	68	70	70	71	71	71	71	70	70	71	71
10,000–30,000	Maximum	150	150	150	150	150	150	150	150	150	215	215	215	215
	Q_3	106	104	104	102	102	102	102	101	101	98	98	98	97
	Median ...	95	77	78	77	77	76	76	77	78	76	77	76	76
	Q_1	55	64	65	64	64	65	65	65	65	65	65	64	64
	Minimum .	30	15	15	15	15	20	20	20	20	30	30	30	30
No. of Cities 108	No. Cases .	10	101	101	102	102	104	104	103	103	104	104	104	104
5,000–10,000	Maximum	150	150	150	150	150	150	150	150	150	150	150	175	175
	Q_3	103	104	104	102	102	99	100	95	95	95	95	95	95
	Median ...	65	74	73	72	72	70	71	73	73	69	70	73	73
	Q_1	52	61	60	61	62	61	61	63	63	60	60	62	62
	Minimum .	40	20	20	30	25	25	25	30	30	30	30	20	20
No. of Cities 75	No. Cases .	10	67	68	69	69	71	71	70	70	71	71	71	71
2,500–5,000	Maximum	300	150	150	150	200	150	150	160	160	210	210	210	210
	Q_3	145	105	104	106	106	103	103	98	98	94	93	92	91
	Median ...	90	75	74	73	73	72	71	69	69	68	68	68	68
	Q_1	70	57	56	57	58	60	59	61	60	55	55	61	61
	Minimum .	60	20	25	25	25	30	25	25	25	25	25	30	30
No. of Cities 96	No. Cases .	8	77	79	84	84	88	88	90	90	89	89	88	85
Less than 2,500 ...	Maximum	75	150	150	150	150	180	180	125	125	130	130	200	200
	Q_3		79	79	71	71	93	91	71	71	77	77	76	76
	Median ...	55	60	60	57	57	59	58	61	61	64	64	57	57
	Q_1		48	48	46	46	44	42	44	44	47	47	43	43
	Minimum .	30	25	25	25	25	25	20	20	20	20	20	20	20
No. of Cities 51	No. Cases .	3	38	38	41	41	43	43	39	39	39	39	38	38

for communities of less than 2,500, to 100 per cent for cities having a population of 100,000 or over. With one exception an advance from a smaller to the next larger population group is accompanied by an increase in the percentage of cities offering art and drawing. In the second place, considering only those cities in each group which allot time to the subject, the larger the population group, the greater the total amount of time in grades 1–6 which is given to art and drawing. The median amount of time increases regularly step by step from 328 minutes per week for the smallest population group, to 494 minutes per week for cities of the largest population. This same regularity of difference is found in the case of the 25 percentiles and with two exceptions for the 75 percentiles of the time distributions for the several groups.

Table 24B shows the percentage of time given to art and drawing in each grade as based on the average time allotment for each population group. This table emphasizes the relationship between size of city and time given to art. Not only does the percentage of total time allotted to art increase along with the increases in size of city but a corresponding condition is found for the time allotment in each grade.

This table also shows that for all population groups the percentage of time given to art and drawing decreases regularly from the first to the sixth grade with but one or two exceptions. However, as far as the median amounts of time, as shown in Table 24C, are concerned there are no marked differences from grade to grade within a given population group. But here, again, a comparison of median time allotment between the larger and the smaller population groups reveals greater time allotments given by the larger cities. At the same time the fact that there is much greater divergence within given population groups than between them should not be overlooked. Chart 8 illustrates the differences in practice in allotting time to art and drawing by cities having a population of from 30,000 to 100,000. This chart (found on page 88) is also typical of the variation among cities of the other population groups.

Among the kindergartens the time given to art and drawing varies from 30 to 300 minutes per week. In half the population groups the kindergarten medians are greater than those for any other grade.

Music

(See Tables 25A, B, and C; also Chart 8.)

More than 5 per cent of the time of grades 1–6 is devoted to music. This is based on the average time allotment for 444 cities. Of this number, 429 report definite amounts of time given for music instruction.

No definite tendencies in relation to size of population, such as were found for art and drawing, are apparent in the case of music. While music receives by far the smallest time allotments in communities of less than 2,500 population, the next smallest allotments are found in cities of 100,000 or over. This is true for both mean and median allotments.

There are no uniform grade-to-grade tendencies applicable to all population groups. The median amount of time given to music in each half-grade, from the low first to the high sixth, by cities of over 100,000 population does not vary more than 3 minutes in the extremes, which are from 73 to 76 minutes per week. The modal, or most popular time allotment, for music is 75 minutes per week. In cities of 30,000 to 100,000 population there is a tendency to increase the time allotments for music from the first to the fifth grade with a slight dropping off in time for the sixth grade. In three other population groups the peak of the time-curve is reached at the fourth grade.

A study of the data presented in Table 25C in comparison with similar facts for other subjects shows an unusual degree of agreement in time allotments for music. In general, the range of the middle 50 per cent of music allotments for all population groups is within relatively narrow limits. Chart 8 shows this for cities of 30,000 to 100,000. The range of the middle 50 per cent is even more compact for cities of over 100,000 in population.

More than 80 per cent of the kindergartens allot time to music. The median amount of time varies from 73 minutes in one population group to 123 minutes per week in another. It is generally true that more time is given to music in the kindergarten than in any other grade. A few kindergartens report as much as an hour a day allotted to music in contrast with as little as 5 minutes each day given in other cities. Approximately 75 per cent of the kindergartens allot not less than 75 minutes per week to music.

TABLE 25A

MUSIC

Total Number of Minutes per Week Allotted to Music in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Music					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	463	5.1	429	50	900	498	427	581
100,000 and over ..	40	440	4.8	40	240	600	457	381	496
30,000–100,000	74	525	5.7	73	360	900	527	475	606
10,000–30,000	108	493	5.5	108	235	720	494	455	580
5,000–10,000	75	505	5.6	75	235	800	502	454	581
2,500–5,000	96	458	5.0	91	75	827	515	407	594
Less than 2,500 ...	51	270	2.9	42	50	740	333	194	445

TABLE 25B

MUSIC

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Music in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	74	5.5	76	5.3	77	5.0	80	5.1	79	4.9	77	4.8	463	5.1
100,000 and over	40	72	5.1	72	4.8	73	4.7	74	4.7	75	4.8	74	4.8	440	4.8
30,000–100,000 ..	74	83	6.1	85	5.8	88	5.7	90	5.7	90	5.6	89	5.5	525	5.7
10,000–30,000 ...	108	80	6.0	80	5.6	83	5.5	85	5.4	84	5.3	81	5.1	493	5.5
5,000–10,000	75	79	5.9	79	5.6	83	5.5	89	5.7	89	5.6	86	5.4	505	5.6
2,500–5,000	96	72	5 4	76	5.3	76	5.0	79	5.0	78	4.8	77	4.7	458	5.0
Less than 2,500 .	51	47	3.5	51	3.6	47	3.0	46	2.8	39	2.3	40	2.4	270	2.9

TABLE 25C

MUSIC

Number of Minutes per Week Allotted to Music in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	250	100	100	100	100	105	105	125	125	125	125	125	125
	Q_3	153	79	78	79	79	79	79	85	85	90	90	96	96
	Median ...	123	74	73	74	74	73	73	74	74	75	75	76	76
	Q_1	76	67	66	67	67	66	66	65	65	68	68	68	68
	Minimum .	75	40	40	40	40	30	30	30	30	25	25	25	25
No. of Cities 40	No. Cases .	7	40	40	40	40	40	40	40	40	40	40	39	39
30,000–100,000	Maximum	150	150	150	150	150	200	200	160	160	150	150	150	150
	Q_3	108	103	103	104	104	105	105	106	106	106	106	105	105
	Median ...	90	79	79	79	80	88	88	95	95	96	96	91	91
	Q_1	74	74	74	74	74	75	75	75	75	76	76	76	76
	Minimum .	50	58	58	60	60	59	59	60	60	60	60	60	60
No. of Cities 74	No. Cases .	10	72	72	73	73	73	73	73	73	73	73	73	73
10,000–30,000	Maximum	300	125	125	125	125	125	125	150	150	150	150	150	150
	Q_3	128	103	102	101	102	103	103	105	105	104	104	103	102
	Median ...	102	78	78	77	77	78	78	87	87	80	80	79	79
	Q_1	74	72	72	72	72	73	73	72	72	70	70	70	70
	Minimum .	15	35	35	40	40	40	40	40	40	40	40	40	40
No. of Cities 108	No. Cases .	25	105	107	108	108	108	108	108	108	108	108	108	108
5,000–10,000	Maximum	225	150	150	125	125	165	165	165	165	160	160	150	150
	Q_3	126	96	96	102	102	103	103	106	106	106	106	106	105
	Median ...	103	77	77	79	78	79	79	91	91	88	89	86	86
	Q_1	73	72	72	72	72	72	73	75	74	73	74	73	73
	Minimum .	50	40	40	40	40	20	30	40	40	30	30	25	25
No. of Cities 75	No. Cases .	27	74	74	74	74	75	75	75	75	75	75	75	75
2,500–5,000	Maximum	350	150	150	150	150	130	150	150	150	150	150	195	150
	Q_3	155	98	101	104	104	105	105	105	106	106	106	107	106
	Median	90	75	76	78	79	88	92	92	96	93	91	90	80
	Q_1	74	69	69	71	72	71	71	71	69	70	70	67	66
	Minimum .	25	25	25	25	25	30	30	30	40	40	40	30	30
No. of Cities 96	No. Cases .	20	90	90	90	89	88	88	88	88	88	88	88	88
Less than 2,500 ...	Maximum	125	150	140	160	160	125	125	125	125	100	100	125	125
	Q_3	79	79	78	79	79	96	98	95	95	90	90	98	98
	Median ...	73	60	60	71	71	72	72	66	66	68	68	70	70
	Q_1	53	53	53	52	52	49	49	45	45	43	43	55	55
	Minimum .	35	20	20	15	15	20	20	15	15	15	15	25	25
No. of Cities 51	No. Cases .	5	37	37	39	39	35	35	36	36	32	32	30	30

TABLE 26A

HOUSEHOLD AND MANUAL ARTS

Total Number of Minutes per Week Allotted to Household and Manual Arts in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Household and Manual Arts					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	61	0.7	156	25	1,035	147	87	209
100,000 and over ..	40	131	1.4	29	25	505	146	94	229
30,000–100,000	74	116	1.3	40	25	1,035	172	100	241
10,000–30,000	108	57	0.6	38	30	660	135	81	197
5,000–10,000	75	44	0.5	21	40	360	137	92	187
2,500–5,000	96	31	0.3	24	30	400	125	71	183
Less than 2,500 ...	51	10	0.1	4	45	200	150	75	200

TABLE 26B

HOUSEHOLD AND MANUAL ARTS

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Household and Manual Arts in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	2	0.1	2	0.1	3	0.2	6	0.4	18	1.1	30	1.8	61	0.7
100,000 and over	40	3	0.2	3	0.2	7	0.5	17	1.1	40	2.5	61	4.0	131	1.4
30,000–100,000 ..	74	7	0.5	7	0.5	6	0.4	10	0.6	32	2.0	54	3.3	116	1.3
10,000–30,000 ...	108			1	0.1	1	0.1	8	0.5	18	1.1	29	1.8	57	0.6
5,000–10,000	75	1	0.1	1	0.1	1	0.1	1	0.1	15	0.9	25	1.6	44	0.5
2,500–5,000	96	1	0.1	1	0.1	1	0.1	2	0.1	7	0.4	19	1.2	31	0.3
Less than 2,500 .	51	2	0.2	1	0.1	2	0.1	1	0.1	1	0.1	3	0.2	10	0.1

TABLE 26C

HOUSEHOLD AND MANUAL ARTS

Number of Minutes per Week Allotted to Household and Manual Arts in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		75	75	75	75	75	75	120	120	120	120	150	150
	Q_3						74	74	78	78	78	78	97	97
	Median ...	100	28	28	50	50	48	48	67	67	68	68	85	85
	Q_1						41	41	58	58	63	63	66	66
	Minimum .		25	25	25	25	30	30	45	45	45	45	55	55
No. of Cities 40	No. Cases .	1	3	3	2	2	5	5	10	10	23	23	29	29
30,000–100,000	Maximum		275	275	225	225	175	175	150	150	240	240	240	240
	Q_3		165	165	125	125	133	133	123	123	125	125	129	129
	Median ...		67	67	67	67	68	68	85	85	93	93	94	94
	Q_1		62	62	62	62	63	63	66	66	69	69	72	72
	Minimum .		50	50	50	50	50	50	60	60	60	60	50	50
No. of Cities 74	No. Cases .		6	6	6	6	7	7	10	10	28	28	39	39
10,000–30,000	Maximum						90	90	220	220	220	220	220	220
	Q_3 ...								98	98	108	108	108	108
	Median ...				90	90	80	80	70	70	91	78	85	83
	Q_1								62	62	65	64	65	64
	Minimum .						60	60	30	30	30	30	30	30
No. of Cities 108	No. Cases .				1	1	2	2	10	10	21	21	37	37
5,000–10,000	Maximum										180	180	160	160
	Q_3										98	98	122	122
	Median ...	21	60	60	60	60	60	60	60	60	84	84	86	86
	Q_1										64	64	65	65
	Minimum .										40	40	40	40
No. of Cities 75	No. Cases .	1	1	1	1	1	1	1	1	1	13	13	21	21
2,500–5,000	Maximum		100	100	100	100	100	100	100	100	80	80	180	300
	Q_3										69	69	94	95
	Median ..		70	75	100	70	65	100	75	75	65	65	83	84
	Q_1										61	61	64	66
	Minimum .		30	40	100	30	30	100	45	45	25	25	25	25
No. of Cities 96	No. Cases .		2	2	1	2	3	1	2	2	10	11	19	22
Less than 2,500 ...	Maximum							90					125	125
	Q_3													
	Median ...		100	100	75	75	50	75	50	50	50	50	90	90
	Q_1													
	Minimum .							50					50	50
No. of Cities 51	No. Cases .		1	1	1	1	1	2	1	1	1	1	2	2

Household and Manual Arts

(See Tables 26A, B, and C.)

In this study manual arts has been defined to include mechanical drawing, shopwork, such as woodwork, metal work, and the like; and household arts, to include cooking, sewing, and courses in homemaking. In the tabulations the two have been combined under the heading of household and manual arts in order to prevent duplications of time, since the courses for the boys and those for the girls are given simultaneously.

Slightly more than one-third of all the school systems studied include household and manual arts as a part of the elementary curriculum. The larger the population group, the greater the percentage of cities which offer these subjects. Only 4 out of 51 communities of less than 2,500 report household and manual arts, as compared with 29 out of 40 cities of the largest population group. In a few cities work in manual arts is given as an extra activity outside of the regular school hours. The relationship between size of population group and percentage of cities offering household and manual arts has been pointed out in more detail elsewhere in this chapter.

A glance at Table 26C reveals the fact that household and manual arts are usually limited to the fifth and sixth grades, and that many schools include the work in the sixth grade only. A few cities in the larger population groups, however, carry this work down into the first grade. The median allotment for household and manual arts in the sixth grade is approximately 85 minutes per week for four of the different population groups; the median for cities of 30,000 to 100,000 population is somewhat larger, being 94 minutes. Allotments of 60 or 90 minutes per week occur most frequently in the three largest population groups and allotments of 60 and 80 minutes in the smaller cities.

Handwork

(See Tables 27A, B, and C.)

Approximately 50 per cent of the cities include handwork as a part of the elementary program of activities. One hundred ninety-eight cities report specific time allotments, while 31 cities state that handwork is included with art and drawing. Handwork is found more frequently in the programs of the smaller

than in those of the larger population groups. This is just the reverse of the situation found in the case of household and manual arts. Among those cities which report handwork, however, there is a tendency for the larger cities to give more time to it than do the smaller communities.

Handwork is placed primarily in grades 1 and 2, although many cities include it in grade 3. The number of school systems which allot time to handwork decreases regularly from grade 1 to grade 6. In all but one of the population groups the median amount of time given to handwork decreases from the first to the sixth grade.

Handwork is an important part of the curriculum of the kindergartens, more than 70 per cent of which report time allotted to this activity. In each population group the median amount of time given to handwork in the kindergarten is two or three times greater than the allotment in the primary grades. The extreme maximum-minimum range is from 600 to 25 minutes per week in kindergartens of the 10,000 to 30,000 population group; while in cities of 100,000 or over the range is small, coming within the limits of 125 to 100 minutes.

Physical Training

(See Tables 28A, B, and C; also Chart 9.)

Since the World War both physical training and health education have received an increased emphasis in the curriculum of the elementary schools. Physical training received 5.3 per cent of all time spent in the elementary grades in 1926; this is approximately double the allotment in 1904, which was 2.7 per cent, as shown by the data reported in Table 6 of the chapter on "Trends in Time Allotment, 1826-1926." In 1866 physical training received 326 minutes per week in grades 1–6, but by 1904 this amount decreased to 243 minutes. The average amount of time given to physical training in 1914 was 325 minutes, which is one minute less than the allotment in 1866. The increase between 1914 and 1926 amounted to approximately 50 per cent. The average amount of time given to physical training in 1926 by 444 cities (including 41 schools which report no time allotments) was 480 minutes. The median allotment for 403 cities which allot time to physical training is 513 minutes per week. Twenty-five per cent of this group give at least 647 minutes per week.

TABLE 27A

HANDWORK

Total Number of Minutes per Week Allotted to Handwork in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Handwork					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	85	0.9	198	10	830	172	102	261
100,000 and over ..	40	56	0.6	11	100	285	206	146	240
30,000–100,000	74	77	0.8	26	25	775	210	137	275
10,000–30,000	108	60	0.7	35	10	830	155	89	235
5,000–10,000	75	89	1.0	38	20	470	172	110	232
2,500–5,000	96	120	1.3	55	25	687	165	79	359
Less than 2,500 ...	51	103	1.1	33	25	350	154	115	229

TABLE 27B

HANDWORK

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Handwork in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	30	2.2	22	1.5	13	0.8	9	0.6	6	0.4	5	0.3	85	0.9
100,000 and over	40	16	1.2	15	1.0	12	0.8	8	0.5	4	0.3	1	0.1	56	0.6
30,000–100,000 ..	74	25	1.8	19	1.3	12	0.8	10	0.6	5	0.3	6	0.4	77	0.8
10,000–30,000 ...	108	20	1.5	14	1.0	9	0.6	8	0.5	5	0.3	4	0.3	60	0.7
5,000–10,000	75	31	2.3	21	1.5	17	1.1	11	0.7	5	0.3	4	0.3	89	1.0
2,500–5.000	96	43	3.2	33	2.3	17	1.1	10	0.6	10	0.6	7	0.4	120	1.3
Less than 2,500 .	51	44	3.3	30	2.1	12	0.8	7	0.4	5	0.3	5	0.3	103	1.1

TABLE 27C

HANDWORK

Number of Minutes per Week Allotted to Handwork in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	125	75	75	75	75	75	75	60	60	60	60		
	Q_3	123	71	71	66	66	69	69	60	60				
	Median ...	108	59	59	57	57	58	58	63	63	55	55	30	30
	Q_1	104	54	54	52	52	51	51	45	45				
	Minimum .	100	30	30	30	30	30	30	30	30	30	30		
No. of Cities 40	No. Cases .	6	11	11	11	11	9	9	6	6	3	3	1	1
30,000–100,000	Maximum	250	225	225	200	200	160	160	160	160	60	60	75	75
	Q_3	206	104	104	75	70	64	64	66	66	58	58	65	65
	Median ...	175	62	67	60	57	48	48	55	55	50	50	50	50
	Q_1	106	46	48	37	37	33	33	39	39	43	43	45	45
	Minimum .	75	4	4	17	17	8	8	25	25	30	30	40	40
No. of Cities 74	No. Cases .	7	23	22	20	20	15	15	11	11	6	6	6	6
10,000–30,000	Maximum	600	250	250	100	100	100	100	220	220	220	220	220	220
	Q_3	159	90	79	74	74	79	76	78	78	70	70	75	75
	Median ...	127	65	58	61	60	59	59	70	65	55	55	65	65
	Q_1	95	52	45	46	44	46	46	47	46	43	40	45	45
	Minimum .	25	15	15	10	10	20	20	15	15	20	20	20	20
No. of Cities 108	No. Cases .	22	32	33	25	26	17	17	12	11	8	8	6	6
5,000–10,000	Maximum	285	220	200	125	100	120	120	100	100	60	60	65	65
	Q_3	225	101	101	76	77	62	60	60	60	54	54	55	55
	Median ...	165	68	66	55	56	51	50	51	51	46	46	43	43
	Q_1	103	49	49	33	34	33	30	37	37	41	41	30	30
	Minimum .	70	26	20	10	10	10	5	25	25	25	25	20	20
No. of Cities 75	No. Cases .	24	31	31	29	27	26	28	17	17	9	9	8	8
2,500–5,000	Maximum	375	180	425	425	425	150	150	100	100	150	150	100	100
	Q_3	180	104	104	102	105	80	90	77	76	99	99	95	95
	Median ...	155	73	74	71	73	63	65	65	65	68	68	65	65
	Q_1	140	54	55	53	51	47	48	39	40	53	53	53	53
	Minimum .	50	15	15	20	20	25	25	25	25	25	25	25	25
No. of Cities 96	No. Cases .	20	50	51	39	37	25	24	15	16	13	13	10	10
Less than 2,500 ...	Maximum	175	200	150	150	150	110	110	50	50	80	80	80	80
	Q_3		102	95	72	72	56	57	54	54	56	56	56	56
	Median ...	75	68	68	54	54	38	38	40	40	45	45	45	45
	Q_1		53	53	34	34	24	26	28	28	29	29	29	29
	Minimum .	10	10	10	15	15	10	10	15	15	20	20	20	20
No. of Cities 51	No. Cases .	4	32	32	29	29	17	17	10	10	7	7	7	7

TABLE 28A

PHYSICAL TRAINING

Total Number of Minutes per Week Allotted to Physical Training in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Physical Training					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	480	5.3	403	25	1,650	513	367	647
100,000 and over	40	621	6.8	38	270	1,400	610	444	875
30,000–100,000	74	532	5.8	69	75	1,400	581	390	679
10,000–30,000	108	500	5.5	101	25	1,650	546	392	662
5,000–10,000	75	456	5.1	68	90	1,100	461	369	637
2,500–5,000	96	434	4.7	86	25	1,275	477	329	634
Less than 2,500	51	368	3.9	41	50	1,240	475	219	628

TABLE 28B

PHYSICAL TRAINING

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Physical Training in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	79	5.9	79	5.5	81	5.3	81	5.1	80	5.0	80	5.0	480	5.3
100,000 and over	40	107	7.5	107	7.1	103	6.7	104	6.7	101	6.4	99	6.5	621	6.8
30,000–100,000	74	91	6.7	89	6.1	89	5.8	89	5.6	88	5.5	86	5.3	532	5.8
10,000–30,000	108	82	6.1	80	5.6	84	5.6	84	5.4	85	5.3	85	5.3	500	5.5
5,000–10,000	75	73	5.5	71	5.0	77	5.1	79	5.1	77	4.8	79	4.9	456	5.1
2,500–5,000	96	69	5.2	71	5.0	75	4.9	73	4.6	72	4.4	74	4.5	434	4.7
Less than 2,500	51	59	4.4	63	4.5	64	4.1	61	3.7	62	3.7	59	3.5	368	3.9

TABLE 28C

PHYSICAL TRAINING

Number of Minutes per Week Allotted to Physical Training in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	150	300	300	300	300	250	250	205	205	200	200	200	200
	Q_3	150	129	129	129	129	151	151	153	153	151	151	151	151
	Median ...	120	105	105	105	105	103	103	104	104	104	104	104	104
	Q_1	55	78	78	79	79	75	75	77	76	76	76	75	75
	Minimum .	25	25	25	25	25	25	25	30	30	30	30	30	30
No. of Cities 40	No. Cases .	6	38	38	38	38	38	38	38	38	38	38	37	37
30,000–100,000	Maximum	150	450	450	300	300	250	250	200	200	200	200	200	200
	Q_3	108	126	126	126	124	127	128	126	127	123	123	113	113
	Median ...	104	102	102	103	103	103	103	103	103	102	102	101	101
	Q_1	100	70	70	72	73	72	72	73	73	72	71	71	71
	Minimum .	50	25	25	25	25	25	25	40	40	40	40	40	40
No. of Cities 74	No. Cases .	9	64	64	65	65	65	65	66	66	67	67	67	67
10,000–30,000	Maximum	150	275	275	275	275	275	275	275	275	275	275	275	275
	Q_3	126	109	108	109	108	110	109	121	110	122	121	122	121
	Median ...	105	100	98	101	100	102	101	102	102	103	102	102	102
	Q_1	71	71	70	61	61	67	67	72	72	72	72	71	71
	Minimum .	25	25	25	25	25	25	25	25	25	25	25	10	10
No. of Cities 108	No. Cases .	13	94	97	97	97	99	99	98	98	98	98	98	98
5,000–10,000	Maximum	200	200	200	200	200	200	200	190	190	190	190	175	175
	Q_3	129	121	110	108	108	109	109	110	110	109	110	118	115
	Median ...	102	78	78	77	78	79	80	95	98	90	90	101	101
	Q_1	71	61	61	56	58	59	59	60	60	60	60	64	64
	Minimum .	30	20	25	20	23	25	25	25	25	25	25	16	16
No. of Cities 75	No. Cases .	17	62	62	64	63	67	67	67	67	66	66	66	66
2,500–5,000	Maximum	300	225	225	175	175	225	225	250	250	250	250	250	250
	Q_3	148	107	107	107	107	107	107	107	107	108	108	108	108
	Median ...	105	92	88	80	79	95	93	92	90	100	100	98	100
	Q_1	74	56	56	59	59	57	56	59	59	60	60	60	62
	Minimum .	25	15	15	20	20	25	25	25	25	25	25	25	25
No. of Cities 96	No. Cases .	13	77	77	80	80	81	82	81	80	79	79	79	79
Less than 2,500 ...	Maximum	75	170	220	170	220	180	220	180	220	220	340	220	340
	Q_3		107	107	107	107	107	107	107	107	108	108	107	107
	Median ...	35	100	100	100	100	98	98	100	100	102	102	102	102
	Q_1		39	39	50	50	58	58	56	56	58	58	56	56
	Minimum .	25	15	15	15	15	20	20	20	20	20	20	20	20
No. of Cities 51	No. Cases .	3	39	39	40	40	39	39	37	37	34	34	33	33

TABLE 29A

HEALTH EDUCATION

Total Number of Minutes per Week Allotted to Health Education in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Health Education					
				No. Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	245	2.7	394	25	1,050	254	167	348
100,000 and over ..	40	154	1.7	30	75	460	175	128	275
30,000–100,000	74	210	2.3	63	50	1,050	214	156	318
10,000–30,000	108	236	2.6	93	25	900	238	166	332
5,000–10,000	75	260	2.9	66	77.5	900	283	203	365
2,500–5,000	96	291	3.2	95	40	775	284	174	386
Less than 2,500 ...	51	275	3.0	47	75	650	288	182	409

TABLE 29B

HEALTH EDUCATION

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Health Education in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade												Total Grades 1–6	
		1		2		3		4		5		6			
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	30	2.2	31	2.2	37	2.4	44	2.8	51	3.2	52	3.2	245	2.7
100,000 and over	40	21	1.5	21	1.4	23	1.5	27	1.7	32	2.0	30	2.0	154	1.7
30,000–100,000 ..	74	25	1.8	28	1.9	35	2.3	37	2.3	42	2.6	43	2.7	210	2.3
10,000–30,000 ...	108	30	2.2	32	2.2	34	2.3	43	2.7	48	3.0	49	3.1	236	2.6
5,000–10,000	75	39	2.9	37	2.6	40	2.7	44	2.8	50	3.1	50	3.1	260	2.9
2,500–5,000	96	35	2.6	35	2.4	43	2.8	52	3.3	62	3.8	64	3.9	291	3.2
Less than 2,500 .	51	24	1.8	27	1.9	41	2.6	53	3.2	62	3.7	68	4.0	275	3.0

TABLE 29C

HEALTH EDUCATION

Number of Minutes per Week Allotted to Health Education in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	75	75	75	80	80	80	80	80	80	100	100	100	100
	Q_3	59	53	53	52	52	53	53	56	55	59	59	58	58
	Median ...	53	31	31	33	33	36	36	37	37	41	41	40	40
	Q_1	43	24	24	24	24	28	28	30	30	32	32	31	31
	Minimum .	25	7.5	7.5	7.5	7.5	7.5	7.5	15	15	15	15	20	20
No. of Cities 40	No. Cases .	5	25	25	25	25	26	26	27	28	29	29	28	28
30,000–100,000	Maximum	50	150	150	170	170	300	300	300	300	200	200	200	200
	Q_3	29	54	55	56	57	59	59	63	62	65	65	66	67
	Median ...	25	30	32	40	42	48	47	51	50	50	50	51	52
	Q_1	21	24	24	26	26	27	27	33	33	35	35	37	37
	Minimum .	15	15	15	12	12	15	15	20	20	20	20	20	20
No. of Cities 74	No. Cases .	6	47	47	48	48	51	51	55	55	59	59	58	59
10,000–30,000	Maximum	220	300	300	300	300	300	300	250	250	250	250	250	250
	Q_3	54	59	58	57	57	58	58	73	72	76	78	78	79
	Median ...	31	40	38	40	40	44	44	50	50	54	56	55	56
	Q_1	23	26	26	26	26	28	29	31	31	34	34	36	36
	Minimum .	15	15	10	10	10	10	10	10	10	15	15	15	15
No. of Cities 108	No. Cases .	17	72	73	78	79	79	81	83	86	85	87	85	86
5,000–10,000	Maximum	150	165	165	165	165	150	150	150	150	175	150	200	150
	Q_3	103	59	59	59	59	67	67	69	68	73	73	78	74
	Median ...	53	52	51	51	49	53	52	53	53	57	57	60	58
	Q_1	25	33	31	31	30	30	29	34	34	38	38	42	40
	Minimum .	5	15	15	10	10	10	10	15	15	25	25	15	15
No. of Cities 75	No. Cases .	14	58	58	59	59	61	61	64	64	64	64	65	63
2,500–5,000	Maximum	75	150	150	125	125	125	150	150	150	150	150	250	250
	Q_3	58	60	60	59	59	69	70	78	78	102	103	105	103
	Median ...	45	55	51	46	46	53	54	59	59	66	65	70	69
	Q_1	24	25	27	26	26	33	33	37	35	41	40	46	44
	Minimum .	15	10	10	10	10	10	10	10	10	10	10	10	10
No. of Cities 96	No. Cases .	11	72	72	74	73	80	80	86	86	89	88	85	85
Less than 2,500 ...	Maximum	100	100	100	100	100	200	200	200	200	215	215	275	275
	Q_3		56	55	58	58	75	76	79	79	101	101	108	108
	Median ...	35	40	39	51	50	53	54	60	59	65	65	71	73
	Q_1		27	26	27	27	28	29	41	40	44	44	30	41
	Minimum .	25	15	15	15	15	15	10	10	10	10	10	20	20
No. of Cities 51	No. Cases .	3	30	31	32	33	36	38	42	41	45	45	43	45

The greatest amount of time allotted to physical training in grades 1–6 by any city is 1,650 minutes per week.

The percentage of total time given to physical training increases regularly from the smallest to the largest population groups. The median amount of time given to this subject by cities of 100,000 population or over is 28 per cent greater than that given by communities of less than 10,000. This may be due in part to two factors: (1) the better facilities for physical training, such as gymnasiums or play courts found in the modern school plants of the large cities, (2) greater congestion in the big cities which makes the demand for physical training more imperative.

There is a strongly marked tendency to place physical training in all grades, and the amount of time given to it is practically the same from grade to grade. In four out of six population groups the median for each of the six grades is approximately 100 minutes per week. More than 25 per cent of all cities having a population greater than 30,000 allot at least two hours a week in each grade for physical training. The variability in practice, as indicated by the maximum-minimum allotments and the range of the middle 50 per cent for cities of 30,000 to 100,000, is shown graphically in Chart 9, page 93.

More than 50 per cent of the kindergartens allot time to physical training. In five population groups the median allotment is slightly more than 100 minutes per week. The maximum allotment reported for kindergartens is 300 minutes per week.

Health Education

(See Tables 29A, B, and C; also Chart 9.)

The average time devoted to health education in grades 1–6 increased from 64 minutes per week in 1904, to 245 in 1926. Health education was not found in the curriculum of these grades in 1866, as was pointed out in Chapter II. In 1926 there were 374 cities out of 444 which reported specific allotments to health education, and 20 which reported that it was given with other subjects or incidentally.

The relationship between size of population and the study of health education may be stated briefly as follows:

1. The larger the population group, the smaller the percentage of cities allotting time to health education. The range is from

99 per cent in communities of 2,500 to 5,000 population, to 75 per cent in cities of 100,000 or over.

2. The smaller the city, the greater the amount of time given to the study of health education. This is true not only of the average time allotments in which all cities of each group are considered, but also of the median allotments which take into consideration only those cities actually allotting time to the subject.

Both the amount and percentage of time given to health education in each grade increase from the first to the sixth grade. This is true of all population groups.

The number of cities allotting time to health education in each half-grade increases somewhat from the first grade to the sixth grade. Although some school authorities evidently consider health education as best adapted to the upper grades, there is a marked tendency to carry instruction in health all the way down into the kindergarten, where it will be found as part of the curriculum in 50 per cent of the school systems which report kindergartens.

Social Science

(See Tables 54A, B, and C in Appendix D.)

Twenty cities out of 444 reported time allotments for social science in some one or more grades. Fifteen of these were cities belonging to either the 10,000 to 30,000, or the 30,000 to 100,000 population groups. The range of total time given to social science in grades 1–6 is from 40 to 1,350 minutes per week, while the median for the 20 cities is 325 minutes. The variability in time allotment is extreme. The range of time given by the middle 50 per cent of the cities allotting time to this subject extends from 230 minutes per week in all grades to 875 minutes. The number of cases is too limited to draw any conclusions in comparison of practice in the various population groups. The tables for social science will be found in Appendix D.

Minor Activities

(See Tables in Appendix D.)

Tables similar to those included for each subject in the preceding sections of this chapter have been prepared for each of the following minor activities, and will be found in Appendix D.

Opening Exercises (See Tables 55A, B, and C)
Projects and Activities (See Tables 56A, B, and C)
Recess (See Tables 57A, B, and C)
Supervised Study (See Tables 58A, B, and C)
Unassigned and Free Time (See Tables 59 A, B, and C)
Miscellaneous (See Tables 60A, B, and C)

Ninety-two per cent of all cities and 100 per cent of communities of less than 2,500 include opening exercises as a part of the elementary program. All population groups except the smallest allot approximately the same amount of time to opening exercises. Communities of less than 2,500 population give approximately 40 per cent more time than the other groups. The variation in time from grade to grade is very slight. In all cities above 2,500 population the median time in all half-grades in each group lies between 54 and 60 minutes per week.

Time allotments for projects and activities which are reported by less than one-seventh of all cities studied show extreme variations. One city of the 30,000 to 100,000 population group reports 4 minutes per week in contrast to one which reports 1,690 minutes per week in grades 1–6. The tendency is to allot more time in the lower than in the upper grades to projects and activities. The greatest amount of time is given in the kindergarten, where the median allotments vary from 130 to 205 minutes per week, depending on the population group. The maximum time allotted to projects and activities in the kindergarten is 675 minutes per week; the minimum is 30 minutes.

Recess is reported by 407 cities. The time varies from as little as 10 minutes per week in certain grades in some cities, to 375 minutes in others. No definite tendency as related to size of cities is apparent. In three of the population groups the amount of time given to recess decreases from the lower to the higher grades. In the smallest population group the tendency is the reverse. This is probably due to the fact that the smaller communities have a shorter school day in the lower grades and a longer school day in the upper grades than do the larger cities.

Supervised study is reported by 175 out of 444 communities. The smaller the population group, the greater the percentage of cities reporting supervised study in some one or more grades. Only 4 cities of the largest population group allot time to supervised study. The median amount of time given to it is exactly

the same in the largest population group as in the smallest, aggregating 350 minutes per week in all grades combined. The tendency is to give a greater percentage of time to supervised study in the upper than in the lower grades.

Unassigned and free time includes periods that are given over to a child for free expression where no task is assigned, and where he may within the room do anything that he may care to do. The greatest amount of free time given as indicated by the median allotment is found in cities of 100,000 or over in population; the next greatest amount is in communities of less than 2,500 population. The general tendency in the largest population groups is to decrease the amount of free time from grade 1 to grade 6. The opposite is true for communities of the two smallest population groups. Sixty per cent of the kindergartens encourage free expression of the child by allotting unassigned time. The median amount of time in the kindergarten varies from 70 to 147 minutes per week. The maximum in several population groups is 300 minutes.

Time was allotted by 231 cities to miscellaneous subjects and activities which were not included in the specified list as defined in the report blank sent out by the Bureau of Curriculum Research.

CHAPTER VI

LENGTH OF SCHOOL DAY AND SCHOOL YEAR

Length of School Day

Length of School Day, 1926.—Obviously, the amount of time which is available for allotment to the several subjects and activities depends upon the length of the school day. In Table 30 will be found a distribution of the 444 cities included in this study showing the length of school day maintained by each city in each half-grade in 1926. It is strikingly evident from this table, as shown by the wide range of distribution, that there is no close agreement among school authorities as to what constitutes the optimum length of school day. This is shown graphically in Chart 10.

The median length of school day, exclusive of the noon lunch period, in 444 cities varies from 4 hours and 36 minutes in the low first grade, to 5 hours and 30 minutes in both the low and the high sixth grade. The length of day increases gradually from grade to grade, the greatest difference, which amounts to 17 minutes, being found between the high first and the low second grades. The median length of day for the low second grade is 4 hours and 54 minutes, that for the high second being 1 minute more. In the third grade the median length of the daily session is 5 hours and 7 minutes; in the fourth grade, 5 hours and 17 minutes; and in the fifth grade, 5 hours and 23 minutes.

The maximum length of school day, exclusive of noon period, reported for the first grade (both low and high divisions) is 6 hours; that for the third grade, 6 hours and 30 minutes; the maximum length of day for the sixth grade pupils is 7 hours.

The upper twenty-five per cent of the 444 school systems, distributed as to length of school day, hold daily sessions of at least 4 hours and 59 minutes in the low first grade; 5 hours in the high first grade; 5 hours and 9 minutes in the second grade; 5 hours and 27 minutes in the third grade; 5 hours and 36 min-

utes in the fourth grade; 5 hours and 38 minutes in the fifth grade; and 5 hours and 40 minutes in the sixth grade. These are all exclusive of the noon lunch period.

TABLE 30

LENGTH OF SCHOOL DAY IN MINUTES, EXCLUSIVE OF NOON PERIOD, SHOWING THE DISTRIBUTION FOR EACH HALF-GRADE IN 444 CITIES, 1926

Minutes in School Day	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	L	H	L	H	L	H	L	H	L	H	L	H
420											3	3
410–419							1	1	1	1		
400–409												
390–399					1	1	1	1	1	1	2	2
380–389												
370–379			1	1	1	1	2	2	6	6	7	7
360–369	5	5	8	9	15	15	26	27	31	32	30	30
350–359	1	2	2	1	4	4	9	9	11	11	16	17
340–349	4	4	6	7	27	27	36	36	45	44	48	48
330–339	7	9	27	27	56	56	90	90	104	106	116	117
320–329	5	7	16	15	27	26	31	30	33	32	33	33
310–319	24	22	43	43	57	57	76	76	88	89	77	75
300–309	63	64	101	103	122	124	106	107	94	93	89	89
290–299	25	25	31	31	28	28	15	16	12	12	10	10
280–289	61	59	53	53	39	38	31	30	12	11	9	9
270–279	75	76	55	55	30	30	10	10	2	2	1	1
260–269	18	17	14	13	11	12	2	1				
250–259	35	36	19	19	9	8	2	2	1	1		
240–249	59	58	44	43	10	10	4	4	1	1	3	3
230–239	12	13	8	8	2	2	1	1	2	2		
220–229	14	16	7	7	2	2						
210–219	13	12	3	3	1	1	1	1				
200–209	1	2	3	3	1	1						
190–199	5	5										
180–189	5	4	1	1	1	1						
170–179	3	2	1	1								
160–169	2	2										
150–159	4	2	1	1								
140–149	1	1										
130–139	1											
120–129												
110–119	1	1										
No. of Cities	444	444	444	444	444	444	444	444	444	444	444	444
Maximum	360	360	370	370	390	390	414	414	414	414	420	420
Q_3	299	300	309	309	327	327	336	336	338	338	340	340
Median	276	277	294	295	307	307	317	317	323	323	330	330
Q_1	248	249	272	272	292	292	304	304	309	309	310	310
Minimum	111	111	150	150	185	185	215	237	237	237	240	240

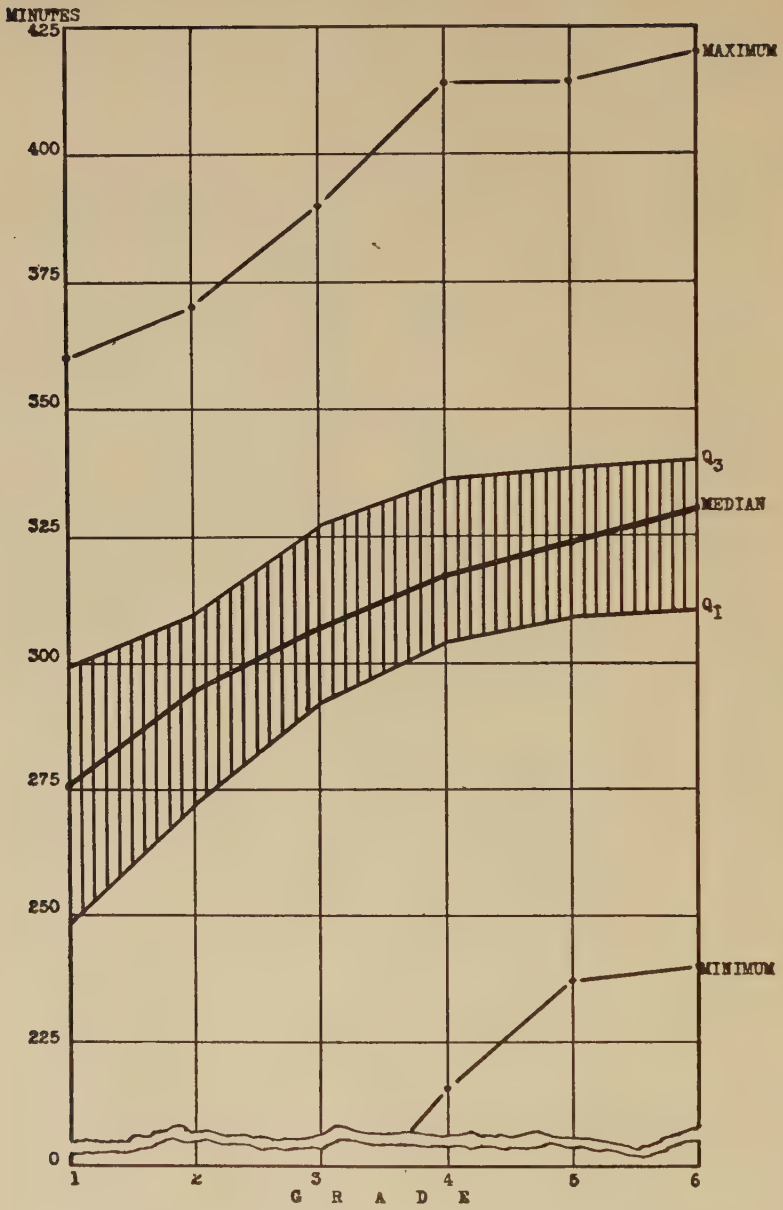

CHART 10

VARIATION IN LENGTH OF SCHOOL DAY IN 444 CITIES, 1926

Showing the Maximum-Minimum Range, the Range of the Middle 50 Per Cent, and the Median Number of Minutes School Is in Session Daily in Each Grade

The semi-interquartile range of the distribution for length of school day varies from grade to grade as follows: First grade, 25.5 minutes; second grade, 18.5 minutes; third grade, 17.5 minutes; fourth grade, 16 minutes; fifth grade, 14.5 minutes; and the sixth grade, 15 minutes. The variability is the same in both low and high divisions of each grade. It is apparent from these statistical measures that the greatest variability in length of day is found in the first grade and the least in the fifth and sixth grades. This is also shown by the maximum-minimum range. In general, the lower the grade, the greater the variability as to length of school day.

While the practice of the middle 50 per cent of our schools as to length of day is in fairly close agreement in the upper grades, there is a wide divergence among the schools making up the lower and upper quarters of the distribution. In the sixth grade, for example, while the range of the middle 50 per cent of 444 school systems is but 30 minutes, the maximum-minimum range is 180 minutes. In 50 per cent of the cities sixth grade classes are in session daily (exclusive of noon recess) for at least 310 minutes, but less than 340 minutes, while the three cities holding the shortest sessions have a school day of but 240 minutes as against 420 minutes for three cities having the longest sessions.

Length of School Day in Relation to Size of City.—The data relative to length of school day for 1926 have been further analyzed to discover whether or not there are any differences in length of time schools are in session daily in cities of the various population groups. In Table 31 will be found the median length of school day in minutes, the longest and the shortest day reported, and the first and third quartiles of the distribution for each half-grade for each of six population groups. The facts as to median length of school day for each grade have been shown graphically in Chart 11 for the two smallest population groups, as compared with the two largest population groups. In order to prevent confusion, the time-curves for the two middle population groups (cities of 10,000 to 30,000 and cities of 5,000 to 10,000) have been omitted from the chart. However, a comparison of the medians given in Table 31 shows that the time-curves for these two middle groups are almost identical, and that they more nearly resemble those for the smaller communities in the lower grades and those of the larger cities in the upper grades.

TABLE 31

LENGTH OF SCHOOL DAY IN MINUTES, 1926

ACCORDING TO SIZE OF CITY

Population Group		Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
		L	H	L	H	L	H	L	H	L	H	L	H
100,000 or over	Maximum	350	350	350	350	390	390	390	390	390	390	390	390
	Q_3	309	310	316	316	319	319	320	320	325	325	325	325
	Median ...	290	297	306	306	309	309	311	311	313	313	313	313
No. of Cities 40	Q_1	265	272	295	295	303	303	304	304	305	305	305	305
	Minimum	150	195	240	240	230	230	240	240	237	237	240	240
30,000–100,000	Maximum	330	355	370	370	370	370	370	370	370	370	379	379
	Q_3	303	304	314	314	333	333	335	335	338	338	338	338
	Median ...	280	280	302	302	308	308	316	316	319	319	328	328
No. of Cities 74	Q_1	254	254	278	278	292	292	304	304	308	308	309	309
	Minimum	111	111	216	216	250	250	270	270	270	270	270	270
10,000–30,000	Maximum	360	360	360	360	360	360	414	414	414	414	414	414
	Q_3	287	288	306	306	314	314	334	334	336	336	337	337
	Median ...	274	274	289	289	304	305	314	314	319	319	322	322
No. of Cities 108	Q_1	249	250	272	272	292	293	304	304	307	307	308	308
	Minimum	135	150	150	150	240	240	240	240	240	240	240	240
5,000–10,000	Maximum	330	330	340	340	340	340	360	360	360	360	360	360
	Q_3	289	289	306	306	319	319	335	335	336	336	337	337
	Median ...	275	275	287	287	306	306	314	314	319	319	324	324
No. of Cities 75	Q_1	252	252	271	271	285	285	302	302	308	308	309	309
	Minimum	160	160	210	210	225	225	236	236	238	238	240	240
2,500–5,000	Maximum	360	360	360	360	360	360	370	370	375	375	377	377
	Q_3	302	302	308	308	328	327	337	337	341	341	345	346
	Median ...	277	277	289	293	308	307	319	319	330	331	333	334
No. of Cities 96	Q_1	245	246	271	272	288	288	305	307	312	313	317	318
	Minimum	150	165	209	209	209	209	250	250	259	259	285	285
Less than 2,500	Maximum	360	360	365	365	365	365	365	365	377	377	420	420
	Q_3	298	298	323	323	345	345	354	354	358	358	360	360
	Median ...	265	265	289	289	324	324	335	335	338	338	343	343
No. of Cities 51	Q_1	241	241	246	246	301	301	312	312	324	324	329	329
	Minimum	145	145	170	170	185	185	215	215	300	300	300	300
All Cities	Maximum	360	360	370	370	390	390	414	414	414	414	420	420
	Q_3	299	300	309	309	327	327	336	336	338	338	340	340
	Median ...	276	277	294	295	307	307	317	317	323	323	330	330
No. of Cities 444	Q_1	248	249	272	272	292	292	304	304	309	309	310	310
	Minimum	111	111	150	150	185	185	215	215	237	237	240	240

There is a marked tendency for the larger cities to offer the children of the lower grades a greater number of minutes of educational opportunity each day than do the smaller cities; and on the other hand, there is just as marked a practice for the smaller

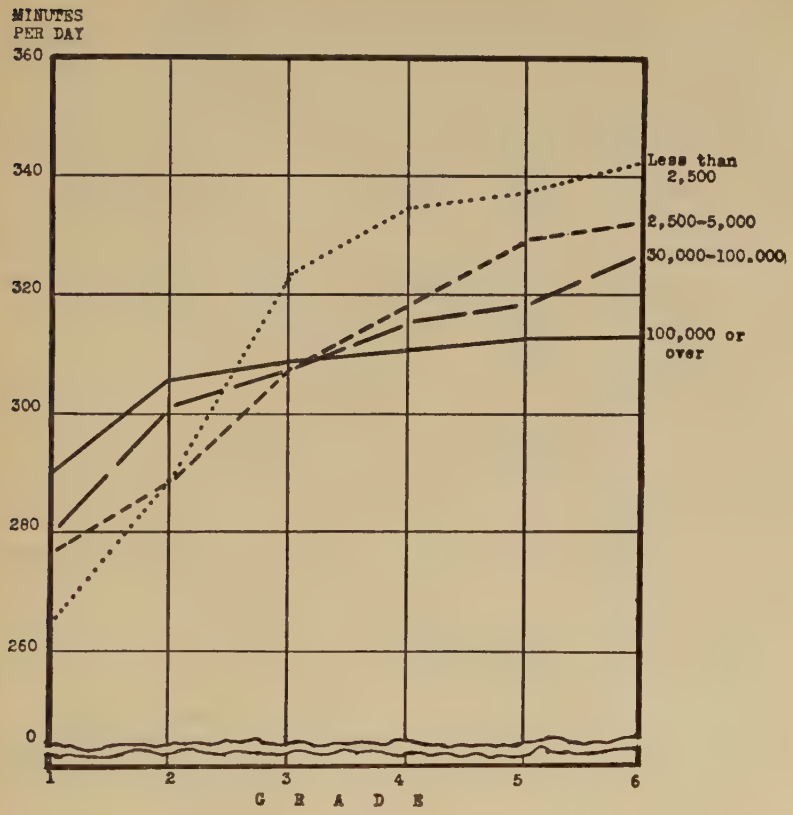

CHART 11

DIFFERENCES IN LENGTH OF DAILY SCHOOL SESSIONS IN CITIES OF LARGE AND SMALL POPULATION GROUPS, MEDIAN PRACTICE, GRADES 1–6, 1926

communities to offer a longer school day in the upper grades. To be specific, in the first and second grades the smaller the community, the shorter the school day, while in the fourth, fifth, and sixth grades, the larger the city, the shorter the daily session. In the third grade the median length of school day is approximately the same in all population groups with the exception of communities having a population of less than 2,500, in which the school day is longer than in any other population group.

In general, as shown by Chart 11, the larger the population group, the longer the school day in the lower grades, and the smaller the population group, the longer the school day in the upper grades of the elementary school.

As far as the total time to be allotted during the six grades of the elementary school is concerned, the differences between the various population groups are not extreme, for the shorter day in the lower grades and the longer day in the upper grades of the small population groups are counterbalanced by the comparatively longer day in the lower grades and shorter day in the upper grades of the large population groups. The average daily session for grades 1–6, by population groups, is as follows: 100,000 and over, 308 minutes; 30,000 to 100,000 population, 309 minutes; 10,000 to 30,000 population, 304 minutes; 5,000 to 10,000 population, 304 minutes; 2,500 to 5,000 population, 310 minutes; less than 2,500 population, 316 minutes; and for 444 cities of all groups, 308 minutes.

The marked differences in the time-curves for the six population groups necessarily imply differences in time allotment theory and practice in the several grades. As far as the writer has been able to discover, these differences in the time-curves have not been determined as the result of experimental evidence as to what constitutes an optimum length of school day in each half-grade. It seems possible that they have been determined, to a great extent, by the factors of precedence and of convenience—convenience both to the school organization and to the home. The wide variance in practice as to length of daily school sessions indicates the need of research to determine the optimum length of the school day in the several grades of the elementary school.

Comparative Length of School Day, 1823-1926.—How does the length of school day in 1926 compare with the school day of past years? This question may be answered by reference to Table 32 in which the length of school day by grades has been given for 1823, 1845, 1856, 1866, 1904, and 1926. The time-curves for these years are shown graphically in Chart 12. Two sets of figures have been included for 1926: one, the average practice of 444 cities, and the other, the average recommendation or requirement of 14 states. The facts as to length of day for 1823 and 1845 were available for one city only, Boston, and for 1856 for but one city, Cleveland. However, these may be considered typical of the practice of the American schools during the first half of the nineteenth century.

The length of the daily school sessions in Boston in 1823 varied from 5 hours and 30 minutes during the winter term to 7 hours

during the longer days of the summer term, or an average of 6 hours and 15 minutes for the two terms. However, it is probable that the net time for each pupil was not more than six hours a day, for during the summer time classes alternated in early dismissals, half the pupils being dismissed one hour before the

TABLE 32

COMPARATIVE LENGTH OF SCHOOL DAY, 1823–1926, BY GRADES

Average Number of Minutes per Day Exclusive of Noon Period

Year	Average No. of Minutes per Day in Each Grade					
	1	2	3	4	5	6
1926 (444 Cities)	269	287	307	316	323	323
1926 (14 States)	268	278	314	320	329	329
1904	263	286	299	304	314	311
1866	300	303	307	318	325	325
1856 (Cleveland)	360	360	360	360	360	360
1845 (Boston)	360	360	360	360	360	360
1823 and 1827 (Boston)	375	375	375	375	375	375

Note 1. The figures given in this table are means. The 1926 figures, therefore, are not identical with the medians for 1926 as given in Tables 30 and 31.

Note 2. Present type of graded organization not in vogue in Boston in 1823 and 1845. Time given is for corresponding years in the Grammar and Writing Schools.

regular time of closing the morning school and one-half hour before closing the evening school. The remaining pupils were then given special instruction. In Section 5 of the *Regulations of the School Committee of the City of Boston, 1823,* the school day is defined as follows:

> From the first Monday in April to the first Monday in October annually the hours for keeping these schools shall be from 8 o'clock, A. M. until 12, and from 2 until 5 o'clock, P. M., and from the first Monday in October to the first Monday in April from 9 to 12 and from 2 to half past 4.

The school day is similarly defined by the Regulations of the School Committee issued for 1827, except that the afternoon hours of the summer term are given as from "3 until 6 o'clock, P. M." instead of from "2 until 5 o'clock, P. M." as in the 1823 regulation.

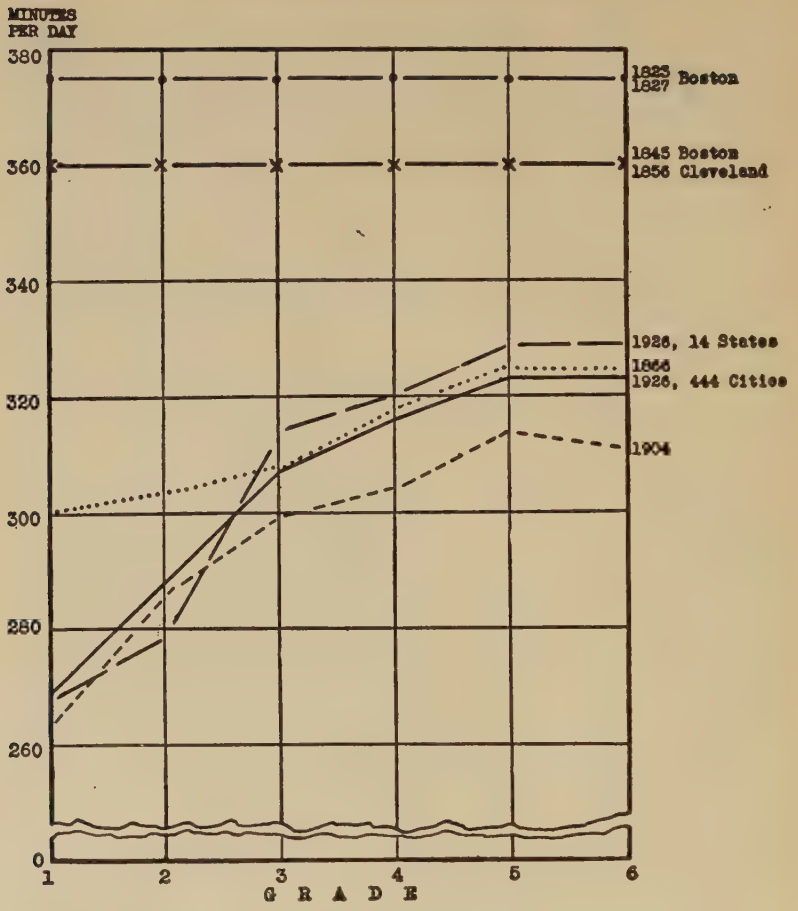

CHART 12

TRENDS IN AVERAGE LENGTH OF DAILY SCHOOL SESSIONS 1823–1926

The school day in Boston in 1845, according to Caldwell and Courtis,[1] was 6 hours. Their statement is as follows:

The length of the daily session was apparently six clock hours, but varied somewhat at different times of the year. From the first Monday in May to the first Monday in October, school began at eight o'clock and closed at five. For the balance of the year the hours are given as 9:00 to 12, 2:00 to 5:00. Ordinarily there was a fifteen-minute recess each half day, but from the first Monday in November until the first of March the afternoon recess was omitted and the schools closed at four.

[1] Caldwell, Otis W., and Courtis, Stuart A. *Then and Now in Education 1845–1923*, p. 13. World Book Co., 1924.

The length of school day in 1823 and in 1845 was the same for all pupils, regardless of their place of advancement in the courses of the Grammar and Writing Schools. Although the present type of graded organization in elementary schools was not in vogue in Boston either in 1823 or in 1845, for purposes of comparison with present practice, the length of the school day in the Boston schools at these dates has been tabulated and charted to correspond to the graded system.

The annual school report for Cleveland for 1856, shows that a graded system was maintained in that city, and that the daily sessions in all grades were six hours in length.

It is interesting to note that the average length of school day in 1866 in each of the third, fourth, fifth, and sixth grades does not vary more than 2 minutes from the respective averages for 444 cities in 1926. This part of the time-curve for 1866 parallels and lies just above the curve which shows the average practice of these 444 cities in 1926 and parallels and lies just below the curve which represents the average recommendations and requirements of 14 states in 1926. The averages for the first and second grades in 1866 are somewhat greater than the practice in 444 cities in 1926, but they correspond closely to the present practice in cities of 100,000 and over.

Practice in 444 cities in 1926 is not widely separated from average recommendations by 14 states in the same year. On the whole, these curves parallel each other, the states' recommendation curve being slightly below the practice curve in grades 1 and 2, and somewhat above the practice curve in grades 3 to 6.

As shown by Chart 12, the general trend of the past 100 years has been to reduce the length of the daily school sessions. A century's change has resulted in the following reductions in length of school day for each grade: first grade, 106 minutes; second grade, 88 minutes; third grade, 68 minutes; fourth grade, 59 minutes; fifth grade, 52 minutes; and sixth grade, 52 minutes. It should be noted that by far the greater part of these reductions had been accomplished by 1866, since the time-curves for 1866 and 1926 are almost identical, with the exception of deviations in the case of the first and second grades. A comparison of the time-curves for 1904 and 1926, moreover, seems to indicate some recent reaction against this general tendency to shorten the school day, and a counter movement in the direction of lengthen-

ing it. In every grade the average length of the daily sessions is greater in 1926 than in 1904.

Length of School Year

Length of School Year, 1926.—The average length of the school year for 1926 as reported by 997 city and county superintendents is exactly 37 weeks. The average length of time that schools are in session annually increases as the size of the population group increases, the mean for rural schools being 34.7 weeks, as compared with 39.1 weeks for cities having a population of over 100,000 (see Table 33). The length of the school year ranges from 20 weeks to 40 weeks in the rural districts and from 36 weeks to 42 weeks in cities of over 100,000 population. In general, the larger the population group, the less the variability in length of school year.

Of the 1,134 city and county superintendents who filled out and returned the time allotment schedules, 997 included a statement as to the length of time during which their schools were in session annually. These replies were divided according to population groups as follows:

Population Group	No. Reporting Length of School Year
100,000 and over	37
30,000–100,000	86
10,000– 30,000	148
5,000– 10,000	158
2,500– 5,000	218
Less than 2,500	167
Rural School Districts	183
Total	997

The facts as to the length of the school year in the 997 communities of the several population groups are exhibited in Table 33.

In Table 34 are shown the number and percentage of each population group which offer (1) less than 36 weeks, (2) 36 weeks or more, (3) 38 weeks or more, and (4) 40 weeks or more

of school annually. Of the 997 city and rural districts studied, 884, or 88.7 per cent, report a school year of at least 36 weeks; 450, or 45.1 per cent, a school year of 38 or more weeks; and 271, or 27.2 per cent, a school year of from 40 to 42 weeks. One

TABLE 33

LENGTH OF SCHOOL YEAR IN WEEKS AS REPORTED BY 997 COMMUNITIES FOR 1926

DISTRIBUTION BY POPULATION GROUPS

Number of Weeks in School Year	Population Groups							All Groups
	Rural	Less than 2,500	2,500–5,000	5,000–10,000	10,000–30,000	30,000–100,000	100,000 or over	
42							1	1
41			1		3			4
40	16	36	59	42	50	42	21	266
39	1		4	12	6	5	4	32
38	8	14	31	34	34	20	6	147
37		1	3	3	2	4		13
36	91	77	115	66	53	14	5	421
35	3		1					4
34	6	6	1					13
33								
32	44	31	2	1		1		79
31								
30	2		1					3
29								
28	8	2						10
27								
26								
25								
24	3							3
23								
22								
21								
20	1							1
Total	183	167	218	158	148	86	37	997
Mean	34.7	36.1	37.4	37.7	38.0	38.6	39.1	37.0
Median	36.3	36.6	36.9	38.3	38.6	39.8	40.2	36.9

hundred thirteen, or 11 per cent of the schools, are in session less than 36 weeks each year. These are found principally in the rural districts and in communities of less than 2,500 population. Of 429 cities having a population of 5,000 or more, only two offer less than 9 months of school, one of which is in the 5,000 to 10,000 population group and the other in the 30,000 to 100,000 population group; each reports a school year of 32 weeks.

Cities of 100,000 or over: Three-fifths of the cities of this class offer 40 or more weeks of school each year; 86.5 per cent have at least 38 weeks. All are open at least 9 months.

Cities of 30,000-100,000: Approximately one-half the schools of this group are in session 40 weeks annually; 77.9 per cent offer 38 weeks or more of instruction; and 98.8 per cent have a term of at least 9 months' duration.

TABLE 34

NUMBER AND PERCENTAGE OF CITIES AND RURAL DISTRICTS REPORTING DIFFERENT LENGTHS OF SCHOOL YEAR
1926

Population Group	No. in Group	Length of School Year Reported							
		Less than 36 weeks		36 weeks or more		38 weeks or more		40 weeks or more	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
100,000 or over ...	37	..	..	37	100.0	32	86.5	22	59.5
30,000–100,000	86	1	1.2	85	98.8	67	77.9	42	48.8
10,000–30,000 .	148	..	..	148	100.0	93	62.8	53	35.8
5,000–10,000 .	158	1	0.6	157	99.4	88	55.7	42	26.6
2,500–5,000 ..	218	5	2.3	213	97.7	95	43.6	60	27.5
Less than 2,500 ..	167	39	23.4	128	76.6	50	29.9	36	21.6
Rural	183	67	36.6	116	63.4	25	13.7	16	8.7
All Groups	997	113	11.3	884	88.7	450	45.1	271	27.2

Cities of 10,000-30,000: More than one-third of the cities of this size open their doors 40 or more weeks each year; 62.8 per cent are open for at least 38 weeks, while the minimum term for the group is 36 weeks.

Cities of 5,000-10,000: Slightly more than one-fourth of the school systems in communities of from 5,000 to 10,000 population are in session 40 weeks annually; 55.7 per cent have a school year of 38 or more weeks, and 99 per cent are open for 36 weeks.

Cities of 2,500-5,000: More than one-fourth of the cities of this class have school sessions of 40 weeks or more, and 97.7 per cent, 36 weeks or more. In 5 cities out of 218 in this population group, or 2.3 per cent, the schools are open less than 36 weeks annually.

Communities less than 2,500: One-fifth of the communities of this group hold annual school sessions of 40 weeks; 29.9 per cent are in session at least 38 weeks. Slightly more than three-fourths of the schools are open at least 9 months each year, and approximately one-fourth are in session less than 36 weeks.

Rural Districts: Only 8 per cent of the rural schools reporting have a school year of 40 weeks; 13.7 per cent, a school year of at least 38 weeks; 63.4 per cent have a school year of 36 or more weeks, and more than one-third are in session less than 36 weeks annually.

Length of School Year in Cities Included in the Study of Time Allotments.—Of the 444 cities whose time allotments have been studied, 399 reported the length of the school. Both the mean and median term for each population group are shown as follows:

Population Group	No. in Group	Length of School Year in Weeks, 399 Cities	
		Mean	Median
100,000 and over	32	39.0	40.1
30,000–100,000	62	38.6	39.4
10,000– 30,000	98	38.2	38.6
5,000– 10,000	72	37.9	38.4
2,500– 5,000	89	37.6	37.5
Less than 2,500	46	36.6	36.7
All Groups	399	37.9	38.5

The mean length of school year for this group is 37.9 weeks, as compared with 37.0 weeks for 997 school systems. If the median length of school term is considered, the 399 cities offer 38.5 weeks of school each year, and the 997 cities offer 36.9 weeks.

Changes in Length of School Year.—What changes, if any, have taken place in the length of school year during the period covered by this investigation? Statistics for the early years included in this study are not available, but the figures of the United States Bureau of Education, as reported in the *Research Bulletin of the National Education Association,*[2] show a marked increase in length of school year between 1880 and 1925. The average length of school term in the United States from 1880 to 1925 is reported as follows:

Year	Average No. of Days Schools Were in Session
1880	130
1890	135
1900	144
1910	158
1920	162
1925	170

From this table it is evident that considerable progress toward increasing the length of school term has been made from decade to decade. The increase from 130 to 170 days during the 45 years between 1880 and 1925 amounts to 40 days, or an increase of 30 per cent. This tendency to lengthen the school term is important, because it makes available more time required to meet the demands of an expanding curriculum without curtailing the time needed for the so-called fundamental subjects.

[2] National Education Association, *Research Bulletin,* Vol. V, No. 4, Sept., 1927.

CHAPTER VII

CONCLUSION

EXTREME DIFFERENCES IN TOTAL TIME ALLOTMENT

It is evident from the findings of this investigation that standardization in time allotment practice in the school systems of the United States is totally lacking. One of the most striking facts revealed by the analysis of present practice in time allotments in 444 cities is the extreme variation in the total amount of time given to any subject, which is the resultant of a general lack of agreement relative to what constitutes the amount of time considered essential for instruction in any given subject in the elementary grades. In order to give a comprehensive view of the extent of divergence of total time allotments for all subjects, the facts have been summarized and are presented in Table 35 in the form of ratios of the maximum to the minimum total time allotment for each subject within each population group, as well as for all groups combined.

While a certain amount of variation in time allotment is to be expected and may be desirable, the extreme differences in current practice, which are shown in Table 35, seem almost incredible. Even in the case of reading, the oldest subject of the curriculum and a subject for which we might expect a rather high degree of standardization, some communities allot 11.8 times as much time as others. Among the several population groups the greatest agreement for this subject is found in cities of 100,000 or over, but even within this group one city gives 4.1 times as many hours of instruction in reading in the elementary grades as another. When the study of phonics is considered, the ratio of the largest time allotment to the smallest is 35.8 to 1, and for literature the ratio is 109 to 1. Among other subjects some communities allot 144 times as much time to nature study or elementary science as others, 66 times as much to physical training, and 42 times as much to health education. Within the

TABLE 35

RATIO OF MAXIMUM TO MINIMUM TOTAL TIME ALLOTTED TO EACH SUBJECT BY 444 CITIES IN 1926

BY POPULATION GROUPS

Subject	444 Cities, All Groups Combined	Population Group					
		100,000 or over	30,000–100,000	10,000–30,000	5,000–10,000	2,500–5,000	Less than 2,500
Reading	11.8	4.1	5.6	4.2	10.3	5.5	4.8
Phonics	35.8	11.4	31.3	14.0	10.0	12.4	8.0
Literature	109.0	4.4	8.8	13.3	31.2	22.5	82.5
Arithmetic	4.4	2.7	3.2	3.8	3.0	2.9	4.0
Language	14.1	3.6	14.1	7.5	5.5	7.4	3.3
Penmanship	12.0	2.8	6.3	3.6	2.2	6.4	8.3
Spelling	48.0	5.7	2.8	3.9	3.0	38.0	6.8
Geography	5.4	4.2	4.3	3.9	3.1	5.1	4.0
History	22.9	12.9	6.8	17.9	15.5	17.1	12.0
Social Science	33.8	4.8	6.8	25.6	—	1.4	—
Citizenship and Civics	107.1	5.0	14.3	46.7	40.0	107.1	18.5
Nature Study and Elem. Science	144.0	6.4	8.4	31.3	43.3	108.0	19.0
Art and Drawing	47.6	6.1	17.0	12.0	18.0	40.8	37.4
Music	18.0	2.5	2.5	3.1	3.4	11.0	14.8
Household and Manual Arts	41.4	20.2	41.4	22.0	9.0	13.3	4.4
Handwork	83.0	2.9	31.0	83.0	23.5	27.5	14.0
Projects and Activities	422.5	3.3	422.5	13.3	30.0	20.4	10.0
Health Education	42.0	6.1	21.0	36.0	11.6	19.4	8.7
Physical Training	66.0	5.2	18.7	66.0	12.2	51.0	24.8
Recess	31.9	4.4	18.0	9.6	26.0	8.0	16.0
Opening Exercises	19.7	6.0	7.1	13.3	13.8	8.0	16.1
Supervised Study	174.0	5.0	108.3	49.5	60.0	154.0	139.2
Unassigned and Free Time	696.7	142.8	293.3	283.3	189.5	117.5	326.6
Miscellaneous	490.7	22.5	66.0	116.7	28.4	59.2	184.0

Table 35 should be read as follows: Among 444 cities of all population groups the city which allots the greatest amount of total time in grades 1–6 to reading gives 11.8 times as much time as the city making the smallest total allotment. Among cities having a population of 100,000 or over, one city allots 4.1 times as much time to reading as another city of the same group. Of those cities belonging to the 30,000–100,000 population group one city allots 5.6 times as much time for reading as another. Data are to be read similarly for other groups and for other subjects.

several population groups the greatest differences for both physical training and health education are found in cities of 10,000 to 30,000 and the least differences in cities of 100,000 or over.

The greatest degree of agreement in time allotments for any subject is found in arithmetic, but even for this subject some communities give 4.4 times as much time as others. Geography ranks second in agreement among all subjects, its ratio of maximum to minimum time allotment being 5.4 to 1. Reading ranks third with a ratio of 11.8 to 1; penmanship, fourth with a ratio of 12 to 1; and language, fifth with a ratio of 14.1 to 1. Within population groups the greatest agreement for penmanship is found in cities of 5,000 to 10,000 population where the maximum allotment is only 2.2 times the minimum. This is the best record for any subject in any population group except for social science in cities of 2,500 to 5,000 where but two cities report the subject. The closest agreement for language is in communities of less than 2,500 population, with the next closest in cities of 100,000 population or over.

For the content group the greatest disagreement is found in the teaching of citizenship and civics for which some cities allot 107 times as much time as others. History fares somewhat better, its relation of high to low allotments being 22.9 to 1.

Projects and activities shows the greatest differences in amounts of time allotted to any subject, if free time and miscellaneous subjects be excepted. The city which places the greatest emphasis on projects and activities gives 422 times as much time as the city which allots the least amount. These two extreme cities happen to be within the same population group—cities of 30,000 to 100,000.

Among the standard Three R's, spelling shows the greatest disagreement. Some communities report 48 times as much time in spelling instruction as others. The greatest variation in spelling is within the 2,500 to 5,000 population group. Outside of this group the agreement is relatively close. The maximum allotment in cities of 30,000 to 100,000 is only 2.8 times as great as the minimum, but in cities of 100,000 or over some school systems allot 5.7 times as many minutes to spelling as others.

There is comparatively close agreement in the case of music in all cities having over 5,000 population, but time assignments for art and drawing vary widely in all groups. The greatest

agreement for art and drawing is found in the largest population group but even here some cities give six times as much time as others.

It is interesting to note that the greatest extremes in time allotted to household and manual arts are found in the three largest population groups, and the least variation in communities of less than 2,500. Some cities of the 30,000 to 100,000 group give 41 times as much time to these activities as others.

In general, there is less variation between extreme allotments for the several subjects among cities of 100,000 or over than among the communities of any other population group.

Variations in Time Allotments to the Same Subject by Individual Cities

In the preceding section the extremes in variations in total time allotments for the several subjects were summarized. Such wide differences in total time as have been shown indicate the existence of diametrically opposed theories of time allotment, if it may be assumed that time allotments have been established as the result of certain theoretical considerations rather than as the result of chance, tradition, or legislative enactment.

In order to illustrate the radical differences in time allotment practice by various cities of a given population group, the grade-to-grade time-curves of several selected cities of the 30,000 to 100,000 population group have been graphically represented for penmanship and spelling in Chart 13. These two subjects have been selected because they are subjects concerning which there appears to be the greatest agreement among specialists in the respective fields relative to the specific objectives to be gained, the methods of instruction to be employed, and the amount of time required to secure the necessary knowledge and skills involved. Consequently, rather close agreement in time allotment practice, both in total time and in grade-to-grade distribution, might reasonably be expected for penmanship and spelling. A glance at Chart 13, however, shows that such is not the case.

The reader's attention is first called to the section of the chart for penmanship. Evidently City E and City K have exactly opposite theories relative to penmanship allotments. The same is true of City R and City W. City E begins penmanship instruction in the low first grade, where it allots 150 minutes per

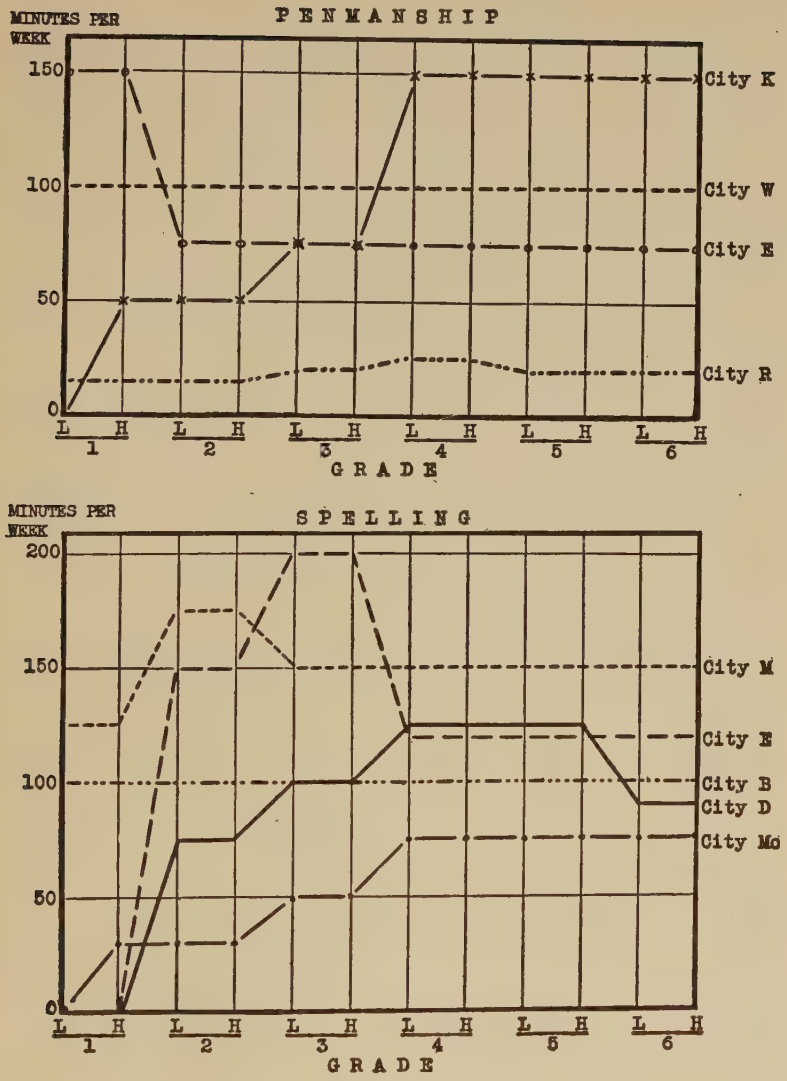

CHART 13

Typical Differences in Time Allotments for the Same Subject by Individual Cities of the 30,000 to 100,000 Population Group

week, or 30 minutes per day, to formal practice in writing, and continues this allotment in the high first grade. After the foundation for writing has been laid in the first grade, City E

cuts the allotment in half and offers but 15 minutes per day in the remaining grades. City K, on the other hand, omits formal instruction in penmanship altogether from the low first grade, gives but 10 minutes per day in the high first grade and throughout the second grade, increases this allotment to 15 minutes per day in grade 3, and then makes a drive for high attainment in writing by giving 30 minutes' practice in penmanship every day throughout grades 4 to 6. City W, whose time allotment practice in penmanship is identical with that of a number of other cities in its population group, begins formal instruction in writing in the low first grade with 100 minutes per week, or 20 minutes per day, and continues this same amount through each of the six elementary grades. City R, whose time allotment curve tends to parallel that of City W, allots less than one-fifth as many minutes per week to penmanship as City W. It will be noted that none of these cities follows the findings of Freeman, which are discussed in the section on penmanship in Chapter V of this study. Freeman sets up an optimum allotment of from 10 to 15 minutes per day, or 50 to 75 minutes per week. With the exception of its extreme overemphasis on penmanship in the first grade, City E follows the upper limit set by Freeman. A combination of City K's allotment curve for the first three grades with City E's curve for the last three would offer a time allotment schedule more nearly approaching the experimental findings to date than any single curve given in the chart.

As pointed out in the section on spelling in Chapter V, authorities in this field hold that the period given to spelling should not exceed 15 minutes daily. In Chart 13 the spelling allotment curves for five cities of the 30,000 to 100,000 population group may be seen. Only one of these five cities (City Mo.) holds its allotment for spelling within the limit set by Horn and others. Its time allotment curve, however, is fairly typical of the curves for 21 out of 74 cities of the group; 53 cities allot time in excess of 15 minutes per day in at least certain grades if not in all. As in the case of penmanship there is wide divergence in theory as to the amount and grade distribution of time to be spent by the pupil in learning to spell. City M begins formal instruction in spelling with 125 minutes per week, or 25 minutes per day, in the low first grade, increases the amount to 35 minutes per day in the second grade, and then maintains an even scale of

30 minutes per day for grades 3–6. In contrast to this, City Mo. allots no time to spelling in the low first grade but schedules 6 minutes per day in the high first and in the second grade. This amount is increased to 10 minutes per day in grade 3 and then to 15 minutes per day in grades 4–6. In grade 2, City M gives more time to spelling in one day than City Mo. gives in one week. City H does not offer spelling in grade 1 but begins this subject with an allotment of 150 minutes per week in grade 2, which is increased to 200 minutes per week, or 40 minutes per day, in grade 3—almost three times the maximum allotment recommended by Horn and others. City H then decreases the allotment to 120 minutes per week in grades 4–6. City B assigns an even 20 minutes per day to spelling in all grades from the low first to the high sixth. City D, which makes no time assignment for spelling in the first grade, increases its allotment from 15 minutes per day in the second grade to a maximum of 25 minutes in grades 4 and 5, and then decreases the emphasis in grade 6.

It seems evident from the differences in time allotment practice by individual cities as shown in Chart 13, and from facts reported elsewhere in this study, that many superintendents are unfamiliar with the findings of scientific investigations in the fields of penmanship and spelling, or if familiar with them, have been unwilling or unable for some reason to change the practice of their schools to conform to these findings. The typical differences in allotment curves, which have been graphically portrayed for spelling and penmanship, might as readily be reproduced for all subjects of the elementary curriculum, in many of which the variation would be even greater than in the case of either spelling or penmanship. The lack of standards in time allotment practice, either for total time or for grade-to-grade distribution, is strikingly apparent for all elementary subjects, and even where standards have been determined by scientific study the failure of cities to readjust their time schedules to meet these findings is marked.

Questions Answered by This Investigation

In this investigation an attempt has been made to answer the following questions:

1. What is the present practice relative to time allotments for

subjects and activities of the elementary schools in communities of all sizes?

2. How does actual time allotment practice compare with recommendations of state educational authorities?

3. What has been the time allotment practice from the origin of the public elementary school in the United States to the present?

4. What changes in time allotments have taken place in the course of the past 100 years?

5. Are there differences in time allotment practice which are apparently related to differences in size of population?

6. How does present practice compare with recommended optimum time allotments for any subjects for which such recommendations are available as the result of research and experimental evidence?

The major part of this investigation has been devoted to answering the first and fifth questions stated above. Previous time allotment studies have usually been limited to a consideration of practice in the largest cities or in local areas such as within the confines of a single state. Superintendents in cities of less than 100,000 population have had no exact information relative to time allotments in other cities of their own population group. As a result of this investigation, a superintendent in a community of any size may now say with assurance that the amount of time given to a certain subject in a certain grade in communities of a size equal to his own is so many minutes. Furthermore, cities of all sizes have available for the first time information relative to allotments in each half-grade from the low first to the high sixth. The detailed analysis of current practice for each subject of the elementary curriculum in each of six population groups has been presented in Chapter V.

The facts discovered in obtaining answers to the third and fourth questions have supplied the data necessary in determining trends in time allotment practice over a period of 100 years. The trends in reference to individual subjects have been pointed out in Chapter II, and the trends relative to the three major groups of subjects, commonly designated as the Three R's, the content subjects, and the special subjects and activities, have been analyzed fully in Chapter IV. Among other interesting facts it has been shown that the percentage of total time allotted

to the Three R's has decreased from 91.7 per cent in 1826, to an average of 51.7 per cent for 444 cities in 1926, or 48.9 per cent as recommended by the educational authorities of 15 states. However, a supplementary study of the length of school day, the length of school year, and the average amount of schooling received by each person has been made which indicates that although the percentage of time given to the Three R's has decreased from 91.7 per cent to 51.7 per cent during the past century, the actual number of hours of instruction in the Three R's received by each child has increased approximately 300 per cent in that period.

The attempt to answer question 6 involved a search through recent educational literature to discover what scientific investigations and experiments had been conducted which would indicate the amount of time necessary for instruction in the several subjects of the elementary curriculum. Experimental evidence bearing on time allotments and efficiency of achievement is rather fragmentary. Apparently the evidence has been conclusive enough to warrant the definite statement of optimum time allotments by the specialists in but two fields, spelling and penmanship. Experiments in arithmetic indicate that more time than is necessary is often given to this subject, but they furnish no conclusive evidence as to what the ideal allotment should be. In the field of reading, expert opinion holds that the time given to reading by many schools should be reduced. In Chapter V, in connection with the discussion relative to each subject for which optimum time allotments are available, present practice and optimum allotments have been compared. For these subjects it has been found that the majority of our cities are making larger allotments than are necessary and are therefore wasting the opportunities of the child to secure other valuable educational experiences.

Is an Optimum Time Allotment Schedule Possible?

Many school superintendents in all sections of the country are beginning to see the need for revision of their time allotments and are looking for the ideal time allotment schedule. General learning experiments indicate that there is an optimum length of period, for certain subjects at least, beyond which the principle of diminishing returns begins to operate. For a few subjects

optimum time allotments have already been determined. That there is a pressing need for some degree of standardization in time allotments is evident from the almost chaotic conditions revealed by this study.

The setting up of an optimum time schedule, however, must await certain scientific developments in the field of education. It is impossible to tell how much time should be given to geography, for example, until we know just how much geography is to be taught and the standard of achievement which is to be attained. The same is true of arithmetic, history, language, music, or any other subject of the elementary curriculum. This is not a matter to be determined by guess, opinion, or tradition but by scientific investigation and experiment.

Optimum time allotments can be established only after educational research has resulted in:

1. The determination on the part of curriculum makers of a definite list of specific objectives and desirable outcomes for each subject which should be attained by pupils of the elementary grades.

2. The determination of the quantity, quality, and kind of educational experiences necessary to insure achievement of the specific objectives.

3. The determination of the most effective methods of instruction to be employed in presenting these educational experiences in order to secure the expected knowledge, skills, attitudes, and ideals. This factor also involves proper grade placement of materials.

Once these three factors are definitely known, determination of the optimum time allotments for any subject may be readily determined by scientifically controlled experiments. The recent nation-wide emphasis on research in the field of the curriculum is contributing much toward the solution of the first two problems, and educational psychology has given its attention to the third. The next step will be the determination of standard time allotments for each unit of the curriculum, subject to consideration of individual differences in the abilities of pupils.

Applications of the Present Study

At the moment the possibility of setting up an ideal time schedule seems somewhat remote, notwithstanding that hundreds

of educational research workers are concentrating their attention on the problems just mentioned. In the meantime such a study as the present one may be used to advantage in checking and validating current practice in time allotments. The writer realizes that statistically determined central tendencies may not always be accepted as safe guides in educational practice, and yet in the absence of experimental evidence they may serve a definite purpose in correcting those extremes of practice which are based on no substantial educational theory but which have been retained through the inertia of tradition.

It is recommended that a superintendent whose time allotments for any subject fall outside the limits of the middle 50 per cent of allotments made by communities of his own population group might find it to advantage to check the achievement of his schools in that subject. If his time allotments are high and the achievement relatively low, it is apparent that there is a waste of time due to one of several factors, such as poorly selected content of the curriculum, incorrect methods of teaching, or inefficiency on the part of his teachers. If the time allotment is low and the achievement below standard, the evidence would indicate the need of increased time for the subject. In checking time allotments, superintendents will find the materials reported in Chapter V and in Appendix D especially helpful. In Table "A" for each subject is reported the median total time given by cities which offer the subject, the range of the middle 50 per cent, as well as the maximum and minimum allotments for each of six population groups. Table "C" exhibits the same facts for a given subject in each half-grade for the several population groups. For those readers who may be interested in central tendencies only, Appendix C shows in one table for each population group the median allotments by half-grades for all subjects.

Teachers may find this study of time allotments useful in checking their programs to determine whether or not they are overemphasizing certain subjects and slighting others. This is especially true for those teachers who are left to their own devices in setting up time allotments upon which to base their daily classroom programs. The existence of such a group is verified by the reply of one county superintendent who, in answer to a request for time allotment information, wrote, "In a

county such as this is, immense in area and small in population, the question of time allotments is left largely to the teachers."

The facts presented in this investigation will also be of use to the school surveyor in evaluating the efficiency of the classroom instruction of a given school system. While the result of a testing program may show the achievement of standard scores in certain subjects, a checking of time allotments may indicate that such scores have been attained as a result of a wasteful expenditure of time.

Above all, it is hoped that the conditions revealed by this study may serve to call the attention of the teaching and administrative personnel of our schools to the pressing need for a scientific study of the problem of carefully budgeting the time which the child spends in the grades of the elementary school.

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APPENDIX A

PERCENTAGE OF CITIES ALLOTTING TIME TO THE VARIOUS SUBJECTS, BY HALF-GRADES, FOR EACH OF SIX POPULATION GROUPS, 1926

TABLE 36

PERCENTAGE OF 40 CITIES OF 100,000 OR OVER IN POPULATION ALLOTTING TIME TO THE VARIOUS SUBJECTS IN 1926

BY HALF-GRADES

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		In Any Grade
	L*	H†	L	H	L	H	L	H	L	H	L	H	
Reading	100.0	100.0	100.0	100.0	100.0	100.0	97.5	97.5	97.5	97.5	95.0	95.0	100.0
Phonics	25.0	27.5	27.5	27.5	17.5	17.5	12.5	12.5	5.0	5.0	2.5	2.5	32.5
Literature	27.5	27.5	27.5	27.5	30.0	30.0	25.0	25.0	25.0	25.0	25.0	25.0	30.0
Arithmetic	57.5	62.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.5	97.5	100.0
Language and Grammar	95.0	95.0	97.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.5	97.5	100.0
Penmanship	85.0	95.0	97.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	95.0	95.0	100.0
Spelling	25.0	47.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.5	97.5	100.0
Geography	20.0	20.0	25.0	25.0	72.5	75.0	95.0	95.0	97.5	97.5	95.0	95.0	97.5
History	37.5	37.5	35.0	35.0	55.0	57.5	75.0	75.0	85.0	87.5	85.0	85.0	90.0
Social Science	5.0	5.0	5.0	5.0	5.0	5.0	2.5	2.5	2.5	2.5	2.5	2.5	5.0
Citizenship and Civics	27.5	27.5	30.0	30.0	35.0	35.0	35.0	35.0	35.0	35.0	32.5	32.5	35.0
Nature Study and Elementary Science	67.5	67.5	70.0	70.0	67.5	67.5	60.0	57.5	55.0	55.0	50.0	50.0	70.0
Art and Drawing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.5	97.5	100.0
Music	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.5	97.5	100.0
Household and Manual Arts	7.5	7.5	5.0	5.0	12.5	12.5	25.0	25.0	57.5	57.5	72.5	72.5	72.5
Handwork	27.5	27.5	27.5	27.5	22.5	22.5	15.0	15.0	7.5	7.5	2.5	2.5	27.5
Projects and Activities	10.0	10.0	10.0	10.0	10.0	10.0	5.0	5.0	5.0	5.0	2.5	2.5	10.0
Health Education	62.5	62.5	62.5	62.5	65.0	65.0	67.5	70.0	72.5	72.5	70.0	70.0	75.0
Physical Training	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	92.5	92.5	95.0
Recess	85.0	87.5	87.5	87.5	87.5	87.5	90.0	90.0	85.0	85.0	82.5	82.5	90.0
Opening Exercises	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	80.0	80.0	77.5	77.5	82.5
Supervised Study	2.5	5.0	5.0	5.0	7.5	7.5	10.0	10.0	10.0	10.0	7.5	7.5	10.0
Unassigned and Free Time	47.5	42.5	40.0	40.0	42.5	42.5	37.5	37.5	35.0	35.0	27.5	25.0	52.5
Miscellaneous	30.0	30.0	30.0	30.0	22.5	22.5	20.0	20.0	25.0	25.0	22.5	22.5	37.5

* L means the low or first half of the grade. † H means tae high or second half of the grade.

TABLE 37

PERCENTAGE OF 74 CITIES OF 30,000 TO 100,000 POPULATION ALLOTTING TIME TO THE VARIOUS SUBJECTS IN 1926

BY HALF-GRADES

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		In Any Grade
	L*	H†	L	H	L	H	L	H	L	H	L	H	
Reading	97.3	97.3	98.6	98.6	98.6	98.6	98.6	98.6	94.6	94.6	94.6	94.6	98.6
Phonics	56.8	58.1	56.8	56.8	39.2	37.8	9.5	9.5	5.4	5.4	4.1	4.1	62.2
Literature	27.0	27.0	28.4	29.7	31.1	31.1	28.4	29.7	32.4	32.4	31.1	31.1	33.8
Arithmetic	66.2	73.0	98.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Language and Grammar	89.2	89.2	94.6	94.6	98.6	98.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Penmanship	87.8	93.2	98.6	98.6	100.0	100.0	100.0	100.0	100.0	100.0	97.3	97.3	100.0
Spelling	32.4	55.4	97.3	95.9	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6
Geography	13.5	13.5	17.6	17.6	70.3	73.0	90.5	91.9	93.2	93.2	94.6	94.6	95.9
History	23.0	21.6	32.4	32.4	47.3	48.6	68.9	68.9	83.8	85.1	89.2	87.8	90.5
Social Science	4.1	4.1	6.8	6.8	6.8	6.8	5.4	5.4	5.4	5.4	5.4	5.4	10.8
Citizenship and Civics	25.7	25.7	25.7	25.7	27.0	27.0	31.1	31.1	37.8	37.8	36.5	36.5	41.9
Nature Study and Elementary Science	47.3	48.6	50.0	51.4	43.2	43.2	37.8	37.8	33.8	33.8	28.4	28.4	55.4
Art and Drawing	91.9	91.9	94.6	94.6	95.9	95.9	95.9	95.9	94.6	94.6	95.9	95.9	97.3
Music	97.3	97.3	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6
Household and Manual Arts	8.1	8.1	8.1	8.1	9.5	9.5	13.5	13.5	37.8	37.8	52.7	52.7	54.1
Handwork	31.1	29.7	27.0	27.0	20.3	20.3	14.9	14.9	8.1	8.1	8.1	8.1	35.1
Projects and Activities	13.5	12.2	5.4	5.4	4.1	4.1	4.1	4.1	4.1	4.1	2.7	2.7	13.5
Health Education	63.5	63.5	64.9	64.9	68.9	68.9	74.3	74.3	79.7	79.7	78.4	79.7	85.1
Physical Training	86.5	86.5	87.8	87.8	87.8	87.8	89.2	89.2	90.5	90.5	90.5	90.5	93.2
Recess	85.1	85.1	83.8	83.8	83.8	83.8	81.1	81.1	74.3	74.3	73.0	73.0	85.1
Opening Exercises	81.1	81.1	79.7	79.7	82.4	82.4	79.7	79.7	79.7	79.7	71.6	71.6	82.4
Supervised Study	6.8	6.8	8.1	9.5	13.5	13.5	14.9	14.9	16.2	16.2	14.9	16.2	21.6
Unassigned and Free Time	45.9	47.3	37.8	40.5	41.9	41.9	40.5	39.2	40.5	40.5	41.9	41.9	62.2
Miscellaneous	33.8	32.8	32.8	32.8	31.1	31.1	25.7	25.7	24.3	24.3	27.0	27.0	47.3

* L means the low or first half of the grade. † H means the high or second half of the grade.

TABLE 38

PERCENTAGE OF 108 CITIES OF 10,000 TO 30,000 POPULATION ALLOTTING TIME TO THE VARIOUS SUBJECTS IN 1926

BY HALF-GRADES

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		In Any Grade
	L*	H†	L	H	L	H	L	H	L	H	L	H	
Reading	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.1	99.1	100.0
Phonics	72.7	72.7	70.4	69.4	49.1	43.5	10.2	10.2	1.9	1.9	1.9	1.9	73.1
Literature	29.6	31.5	31.5	32.4	34.3	33.3	31.5	31.5	26.9	26.9	29.6	29.6	39.8
Arithmetic	74.1	82.4	99.1	99.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Language and Grammar	89.9	90.7	96.3	96.3	99.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Penmanship	90.7	93.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Spelling	44.4	56.5	98.1	98.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1
Geography	10.2	11.1	18.5	19.4	62.0	63.9	97.2	97.2	97.2	97.2	97.2	97.2	97.2
History	14.8	14.8	18.5	18.5	39.8	39.8	63.0	61.1	83.3	81.5	87.0	85.2	91.7
Social Science	4.6	4.6	5.5	5.5	3.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	6.5
Citizenship and Civics	35.2	35.2	36.0	37.0	36.0	36.0	38.0	38.0	39.8	39.8	43.5	43.5	52.8
Nature Study and Elementary Science	44.4	43.5	50.9	50.9	45.4	44.4	37.0	36.1	35.2	33.3	34.3	34.3	61.1
Art and Drawing	93.5	93.5	94.4	94.4	96.3	96.3	95.4	95.4	96.3	96.3	96.3	96.3	98.1
Music	97.2	99.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Household and Manual Arts	—	—	0.9	0.9	1.9	1.9	9.3	9.3	19.4	19.4	34.3	34.3	35.2
Handwork	29.6	30.6	23.1	24.1	15.8	15.8	11.1	10.2	7.4	7.4	5.5	5.5	32.4
Projects and Activities	12.0	13.0	13.8	13.8	10.2	9.3	6.5	7.4	4.6	3.7	6.5	5.5	16.7
Health Education	66.7	67.6	72.2	73.1	73.1	75.0	76.9	79.6	78.7	80.6	78.7	79.6	86.1
Physical Training	87.0	89.9	89.9	89.9	91.7	91.7	91.7	90.7	90.7	90.7	90.7	90.7	93.5
Recess	85.2	86.1	87.0	87.0	86.1	86.1	84.3	84.3	79.6	79.6	79.6	79.6	88.0
Opening Exercises	88.0	88.9	88.9	89.9	89.9	89.9	89.9	90.7	89.9	89.9	90.7	90.7	92.6
Supervised Study	7.4	10.2	11.1	11.1	13.8	15.8	18.5	18.5	22.2	23.1	25.9	26.9	32.4
Unassigned and Free Time	38.9	38.0	34.3	36.1	33.3	34.3	30.6	29.6	27.8	28.7	29.6	28.7	54.6
Miscellaneous	29.6	28.7	25.0	25.9	25.0	25.9	25.0	23.1	25.0	25.0	25.0	24.1	47.2

* L means the low or first half of the grade. † H means the high or second half of the grade.

TABLE 39

PERCENTAGE OF 75 CITIES OF 5,000 TO 10,000 POPULATION ALLOTTING TIME TO THE VARIOUS SUBJECTS IN 1926

BY HALF-GRADES

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		In Any Grade
	L*	H†	L	H	L	H	L	H	L	H	L	H	
Reading	100.0	100.0	100.0	100.0	100.0	100.0	98.7	98.7	93.3	92.0	92.0	92.0	100.0
Phonics	72.0	72.0	70.7	70.7	50.7	46.7	8.0	8.0	5.3	5.3	2.7	2.7	73.3
Literature	42.7	42.7	41.3	41.3	41.3	41.3	49.3	50.7	48.0	48.0	42.7	42.7	60.0
Arithmetic	76.0	84.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Language and Grammar	89.3	89.3	96.0	96.0	98.7	98.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Penmanship	93.3	96.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Spelling	33.3	33.3	92.0	93.3	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7
Geography	8.0	8.0	10.7	10.7	74.7	74.7	98.7	98.7	100.0	100.0	98.7	100.0	100.0
History	25.3	25.3	26.7	25.3	48.0	50.7	70.7	70.7	86.7	88.0	96.0	97.3	97.3
Social Science	1.3	1.3	1.3	1.3	1.3	1.3	—	—	—	—	—	—	1.3
Citizenship and Civics	32.0	33.3	33.3	33.3	40.0	40.0	41.3	41.3	42.7	42.7	45.3	46.7	56.0
Nature Study and Elementary Science	56.0	58.7	61.3	60.0	54.7	56.0	52.0	52.0	42.7	42.7	41.3	41.3	72.0
Art and Drawing	89.3	90.7	92.0	92.0	94.7	94.7	93.3	93.3	94.7	94.7	94.7	94.7	96.0
Music	98.7	98.7	98.7	98.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Household and Manual Arts	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	17.3	17.3	28.0	28.0	28.0
Handwork	41.3	41.3	38.7	36.0	34.7	37.3	22.7	22.7	12.0	12.0	10.7	10.7	50.7
Projects and Activities	6.7	6.7	5.3	5.3	6.7	5.3	2.7	2.7	5.3	5.3	5.3	5.3	13.3
Health Education	77.3	77.3	78.7	78.7	81.3	81.3	85.3	85.3	85.3	85.3	86.7	84.0	88.0
Physical Training	82.7	82.7	85.3	84.0	89.3	89.3	89.3	89.3	88.0	88.0	88.0	88.0	90.7
Recess	96.0	96.0	96.0	96.0	94.7	94.7	92.0	92.0	90.7	90.7	85.3	85.3	97.3
Opening Exercises	92.0	92.0	94.7	96.0	96.0	96.0	96.0	96.0	92.0	92.0	88.0	88.0	97.3
Supervised Study	5.3	5.3	17.3	17.3	17.3	17.3	22.7	22.7	25.3	25.3	22.9	21.3	37.3
Unassigned and Free Time	53.3	49.3	46.7	45.3	41.3	40.0	40.0	40.0	33.3	33.3	29.3	29.3	68.0
Miscellaneous	28.0	28.0	26.7	26.7	26.7	28.0	25.3	24.0	24.0	24.0	22.7	22.7	48.0

* L means the low or first half of the grade. † H means the high or second half of the grade.

TABLE 40

Percentage of 96 Cities of 2,500 to 5,000 Population Allotting Time to the Various Subjects in 1926

BY HALF-GRADES

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		In Any Grade
	L*	H†	L	H	L	H	L	H	L	H	L	H	
Reading	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.9	95.8	95.8	93.7	93.7	100.0
Phonics	76.0	79.2	74.0	71.8	43.7	38.5	11.5	10.4	4.2	4.2	3.1	3.1	80.2
Literature	39.6	41.7	37.5	37.5	38.5	40.6	40.6	39.6	39.6	40.6	40.6	41.7	55.2
Arithmetic	89.6	94.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Language and Grammar	76.0	81.2	89.6	91.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Penmanship	90.6	93.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	99.0	100.0
Spelling	40.6	54.2	93.7	96.9	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	100.0
Geography	10.4	11.5	14.6	14.6	75.0	78.1	96.9	96.9	97.9	97.9	97.9	96.9	97.9
History	22.9	22.9	27.1	28.1	42.7	44.8	65.6	67.7	88.5	88.5	93.7	94.8	95.8
Social Science	—	—	—	—	1.0	1.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Citizenship and Civics	32.3	30.2	36.5	37.5	38.5	38.5	43.7	43.7	46.9	47.9	45.8	47.9	63.5
Nature Study and Elementary Science	58.3	58.3	61.5	60.4	55.2	55.2	50.0	47.9	41.7	41.7	30.2	31.2	75.0
Art and Drawing	80.2	82.3	87.5	87.5	91.7	91.7	91.7	93.7	92.7	92.7	91.7	88.5	95.8
Music	93.7	93.7	93.7	92.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	94.8
Household and Manual Arts	2.1	2.1	1.0	2.1	3.1	1.0	2.1	2.1	10.4	11.5	19.8	22.9	25.0
Handwork	52.1	53.1	40.6	38.5	26.0	25.0	15.6	16.7	13.5	13.5	10.4	10.4	57.3
Projects and Activities	7.3	7.3	6.2	6.2	6.2	6.2	7.3	7.3	5.2	5.2	3.1	3.1	11.5
Health Education	75.0	75.0	77.1	76.0	83.3	83.3	89.6	89.6	92.7	91.7	88.5	88.5	99.0
Physical Training	80.2	80.2	83.3	83.3	84.4	85.4	84.4	83.3	82.3	82.3	82.3	82.3	89.6
Recess	91.7	91.7	95.8	95.8	93.7	93.7	92.7	92.7	90.6	88.5	82.3	81.2	95.8
Opening Exercises	88.5	87.5	93.7	93.7	89.6	88.5	90.6	90.6	83.3	83.3	81.2	82.3	94.8
Supervised Study	17.7	18.7	25.0	26.0	27.1	28.1	34.4	34.4	35.4	35.4	38.5	36.5	54.2
Unassigned and Free Time	39.6	36.5	31.2	30.2	32.3	32.3	26.0	27.1	26.0	26.0	21.9	21.9	58.3
Miscellaneous	37.5	35.4	39.6	38.5	37.5	33.3	34.4	36.5	29.2	29.2	26.0	25.0	58.3

* L means the low or first half of the grade. † H means the high or second half of the grade.

TABLE 41

Percentage of 51 Cities of Less than 2,500 Population Allotting Time to the Various Subjects in 1926

BY HALF-GRADES

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		In Any Grade
	L*	H†	L	H	L	H	L	H	L	H	L	H	
Reading	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	98.0	96.1	96.1	100.0
Phonics	92.2	92.2	86.3	86.3	56.9	52.9	11.6	11.6	2.0	2.0	2.0	2.0	94.1
Literature	29.4	29.4	27.5	27.5	27.5	27.5	29.4	29.4	31.4	31.4	35.3	35.3	49.0
Arithmetic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Language and Grammar	94.1	94.1	100.0	100.0	100.0	100.0	98.0	98.0	100.0	100.0	100.0	100.0	100.0
Penmanship	82.4	96.1	94.1	94.1	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	100.0
Spelling	56.9	58.8	98.0	98.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Geography	11.6	11.6	15.7	15.7	64.7	70.6	98.0	98.0	100.0	100.0	100.0	100.0	100.0
History	15.7	15.7	19.6	19.6	39.2	41.2	56.9	58.8	88.2	88.2	98.0	96.1	100.0
Social Science	—	—	—	—	—	—	—	—	—	—	—	—	—
Citizenship and Civics	27.5	27.5	27.5	27.5	31.4	31.4	33.3	33.3	41.2	41.2	45.1	43.1	54.9
Nature Study and Elementary Science	47.1	47.1	51.0	51.0	49.0	49.0	39.2	39.2	35.3	35.3	37.3	37.3	68.6
Art and Drawing	74.5	74.5	80.4	80.4	84.3	84.3	76.5	76.5	76.5	76.5	74.5	74.5	90.2
Music	72.5	72.5	76.5	76.5	68.6	68.6	70.6	70.6	62.8	62.8	58.8	58.8	82.4
Household and Manual Arts	2.0	2.0	2.0	2.0	2.0	3.9	2.0	2.0	2.0	2.0	3.9	3.9	7.8
Handwork	62.8	62.8	56.9	56.9	33.3	33.3	19.6	19.6	13.7	13.7	13.7	13.7	64.7
Projects and Activities	9.8	9.8	11.6	11.6	11.6	11.6	11.6	11.6	9.8	9.8	5.9	5.9	17.6
Health Education	58.8	60.8	62.8	64.7	70.6	74.5	82.4	80.4	88.2	88.2	84.3	88.2	92.2
Physical Training	76.5	76.5	78.4	78.4	76.5	76.5	72.5	72.5	66.7	66.7	64.7	64.7	80.4
Recess	92.2	92.2	94.1	94.1	92.2	92.2	90.2	90.2	90.2	90.2	88.2	88.2	94.1
Opening Exercises	96.1	96.1	98.0	98.0	94.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	100.0
Supervised Study	37.3	37.3	47.1	47.1	49.0	49.0	41.2	41.2	49.0	47.1	51.0	51.0	78.4
Unassigned and Free Time	49.0	49.0	43.1	43.1	45.1	41.2	39.2	39.2	37.3	35.3	35.3	31.4	64.7
Miscellaneous	49.0	49.0	45.1	45.1	51.0	51.0	47.1	47.1	41.2	41.2	35.3	35.3	74.5

* L means the low or first half of the grade. † H means the high or second half of the grade.

APPENDIX B

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGE OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS BY CITIES OF EACH OF SIX POPULATION GROUPS, 1926

Considering All Cities in Each Group

TABLE 42

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGE OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS IN 1926 BY 40 CITIES HAVING A POPULATION OF 100,000 OR OVER

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	461	32.4	411	27.4	325	21.0	215	13.8	166	10.6	145	9.5	1,723	18.9
Phonics	25	1.8	21	1.4	11	0.7	7	0.4	2	0.1	1	0.1	67	0.7
Literature	28	2.0	25	1.7	24	1.6	23	1.5	25	1.6	25	1.6	150	1.7
Arithmetic	60	4.2	145	9.7	204	13.2	213	13.6	218	13.9	210	13.8	1,050	11.5
Language and Grammar	121	8.5	124	8.3	146	9.4	177	11.3	184	11.7	187	12.3	939	10.3
Penmanship	76	5.3	77	5.1	76	4.9	78	5.0	73	4.6	67	4.4	447	4.9
Spelling	24	1.7	81	5.4	90	5.8	90	5.8	84	5.3	79	5.2	448	4.9
TOTAL THREE R'S	795	55.9	884	59.0	876	56.6	803	51.4	752	47.8	714	46.9	4,824	52.9
CONTENT SUBJECTS														
Geography	6	0.4	10	0.7	58	3.8	127	8.1	160	10.2	160	10.5	521	5.7
History	17	1.2	16	1.1	35	2.3	58	3.7	88	5.6	97	6.4	311	3.4
Social Science	2	0.1	3	0.2	5	0.3	6	0.4	8	0.5	8	0.5	32	0.4
Citizenship and Civics	11	0.8	11	0.7	16	1.0	17	1.1	17	1.1	16	1.0	88	1.0
Nature Study and Elem. Science	29	2.0	34	2.3	30	1.9	25	1.6	23	1.5	21	1.4	162	1.8
TOTAL CONTENT	65	4.5	74	5.0	144	9.3	233	14.9	296	18.9	302	19.8	1,114	12.3
SPECIAL SUBJECTS														
Art and Drawing	89	6.3	88	5.9	87	5.6	86	5.5	83	5.3	80	5.2	513	5.6
Music	72	5.1	72	4.8	73	4.7	74	4.7	75	4.8	74	4.8	440	4.8
Household and Manual Arts	3	0.2	3	0.2	7	0.5	17	1.1	40	2.5	61	4.0	131	1.4
Handwork	16	1.2	15	1.0	12	0.8	8	0.5	4	0.3	1	0.1	56	0.6
Projects and Activities	15	1.0	12	0.8	10	0.6	6	0.4	4	0.3	2	0.1	49	0.5
Health Education	21	1.5	21	1.4	23	1.5	27	1.7	32	2.0	30	2.0	154	1.7
Physical Training	107	7.5	107	7.1	103	6.7	104	6.7	101	6.4	99	6.5	621	6.8
Recess	107	7.5	109	7.3	105	6.8	98	6.3	88	5.6	81	5.3	588	6.5
Opening Exercises	50	3.5	49	3.3	45	2.9	41	2.6	41	2.6	39	2.6	265	2.9
Supervised Study	2	0.1	2	0.1	9	0.6	13	0.8	13	0.8	9	0.6	48	0.5
Unassigned and Free Time	52	3.7	45	3.0	38	2.5	36	2.3	30	1.9	21	1.4	222	2.4
Miscellaneous	27	1.9	19	1.3	14	0.9	15	1.0	14	0.9	13	0.9	102	1.1
TOTAL SPECIAL	561	39.5	542	36.2	526	34.1	525	33.6	525	33.4	510	33.5	3,189	34.8
TOTAL ALL SUBJECTS	1,421	99.9	1,500	100.2	1,546	100.0	1,561	99.9	1,573	100.1	1,526	100.2	9,127	100.0

TABLE 43

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGE OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS IN 1926 BY 74 CITIES HAVING A POPULATION OF 30,000 TO 100,000

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	412	30.3	370	25.2	304	19.8	227	14.4	177	11.1	161	10.0	1,651	18.0
Phonics	58	4.3	44	3.0	23	1.5	4	0.3	2	0.1	1	0.1	132	1.4
Literature	22	1.6	22	1.5	25	1.6	22	1.4	29	1.8	25	1.6	145	1.6
Arithmetic	67	4.9	148	10.1	191	12.4	213	13.5	213	13.3	216	13.4	1,048	11.5
Language	100	7.4	112	7.6	144	9.4	162	10.3	172	10.8	175	10.9	865	9.5
Penmanship	72	5.3	82	5.6	86	5.6	87	5.5	82	5.1	82	5.1	491	5.4
Spelling	31	2.3	82	5.6	92	6.0	92	5.8	89	5.6	86	5.3	472	5.1
TOTAL THREE R'S	762	56.1	860	58.6	865	56.3	807	51.2	762	47.8	746	46.4	4,804	52.5
CONTENT SUBJECTS														
Geography	5	0.4	8	0.5	59	3.8	124	7.8	152	9.5	159	9.9	507	5.5
History	6	0.4	14	1.0	26	1.7	57	3.6	84	5.3	101	6.3	288	3.1
Social Science	5	0.4	7	0.5	9	0.6	13	0.8	14	0.9	16	1.0	64	0.7
Citizenship and Civics	9	0.7	10	0.7	11	0.7	13	0.8	15	0.9	17	1.0	75	0.8
Nature Study and Elem. Science	20	1.5	23	1.6	19	1.2	18	1.1	17	1.1	13	0.8	110	1.2
TOTAL CONTENT	45	3.4	62	4.3	124	8.0	225	14.1	282	17.7	306	19.0	1,044	11.3
SPECIAL SUBJECTS														
Art and Drawing	81	6.0	85	5.8	88	5.7	87	5.5	86	5.4	83	5.2	510	5.6
Music	83	6.1	85	5.8	88	5.7	90	5.7	90	5.6	89	5.5	525	5.7
Household and Manual Arts	7	0.5	7	0.5	6	0.4	10	0.6	32	2.0	54	3.3	116	1.3
Handwork	25	1.8	19	1.3	12	0.8	10	0.6	5	0.3	6	0.4	77	0.8
Projects and Activities	11	0.8	7	0.5	3	0.2	11	0.7	10	0.6	1	0.1	43	0.5
Health Education	25	1.8	28	1.9	35	2.3	37	2.3	42	2.6	43	2.7	210	2.3
Physical Training	91	6.7	89	6.1	89	5.8	89	5.6	88	5.5	86	5.3	532	5.8
Recess	106	7.8	105	7.2	101	6.6	95	6.0	86	5.4	83	5.2	576	6.3
Opening Exercises	42	3.1	43	2.9	43	2.8	40	2.5	39	2.4	37	2.3	244	2.7
Supervised Study	5	0.4	10	0.7	20	1.3	22	1.4	23	1.4	21	1.3	101	1.1
Unassigned and Free Time	44	3.2	36	2.5	37	2.4	36	2.3	32	2.0	32	2.0	217	2.4
Miscellaneous	32	2.4	30	2.0	24	1.6	21	1.3	21	1.3	24	1.5	152	1.7
TOTAL SPECIAL	552	40.6	544	37.2	546	35.6	548	34.5	556	34.5	559	34.8	3,303	36.2
TOTAL ALL SUBJECTS	1,359	100.1	1,466	100.1	1,535	99.9	1,580	99.8	1,600	100.0	1,611	100.2	9,151	100.0

TABLE 44

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGE OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS IN 1926 BY 108 CITIES HAVING A POPULATION OF 10,000 TO 30,000

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	416	31.1	369	26.0	313	20.9	221	14.1	182	11.4	163	10.2	1,664	18.5
Phonics	70	5.2	54	3.8	26	1.7	5	0.3	1	0.1	1	0.1	157	1.7
Literature	17	1.3	18	1.3	20	1.3	20	1.3	19	1.2	21	1.3	115	1.3
Arithmetic	69	5.2	145	10.2	203	13.5	219	14.0	223	14.0	220	13.8	1,079	12.0
Language and Grammar	90	6.7	108	7.6	136	9.1	165	10.5	176	11.0	180	11.3	855	9.5
Penmanship	71	5.3	78	5.5	84	5.6	86	5.5	85	5.3	80	5.0	484	5.4
Spelling	39	2.9	86	6.1	99	6.6	98	6.2	94	5.9	89	5.6	505	5.6
TOTAL THREE R'S	772	57.7	858	60.5	881	58.7	814	51.9	780	48.9	754	47.3	4,859	54.0
CONTENT SUBJECTS														
Geography	4	0.3	8	0.6	55	3.7	140	8.9	162	10.1	167	10.5	536	5.9
History	5	0.4	7	0.5	21	1.4	53	3.4	87	5.4	102	6.4	275	3.0
Social Science	3	0.2	4	0.3	3	0.2	5	0.3	7	0.4	7	0.4	29	0.3
Citizenship and Civics	13	1.0	15	1.1	14	0.9	14	0.9	14	0.9	16	1.0	86	1.0
Nature Study and Elem. Science	19	1.4	22	1.6	20	1.3	16	1.0	14	0.9	16	1.0	107	1.2
TOTAL CONTENT	44	3.3	56	4.1	113	7.5	228	14.5	284	17.7	308	19.3	1,033	11.4
SPECIAL SUBJECTS														
Art and Drawing	76	5.7	76	5.3	76	5.1	75	4.8	76	4.8	73	4.6	452	5.0
Music	80	6.0	80	5.6	83	5.5	85	5.4	84	5.3	81	5.1	493	5.5
Household and Manual Arts			1	0.1	1	0.1	8	0.5	18	1.1	29	1.8	57	0.6
Handwork	20	1.5	14	1.0	9	0.6	8	0.5	5	0.3	4	0.3	60	0.7
Projects and Activities	7	0.5	8	0.6	5	0.3	4	0.3	2	0.2	2	0.1	28	0.3
Health Education	30	2.2	32	2.2	34	2.3	43	2.7	48	3.0	49	3.1	236	2.6
Physical Training	82	6.1	80	5.6	84	5.6	84	5.4	85	5.3	85	5.3	500	5.5
Recess	103	7.7	104	7.3	104	6.9	98	6.2	92	5.8	91	5.7	592	6.6
Opening Exercises	50	3.7	49	3.5	49	3.3	49	3.1	48	3.0	47	2.9	292	3.2
Supervised Study	12	0.9	14	1.0	17	1.1	33	2.1	40	2.5	40	2.5	156	1.7
Unassigned and Free Time	42	3.1	31	2.2	27	1.8	25	1.6	23	1.4	21	1.3	169	1.9
Miscellaneous	19	1.4	15	1.1	16	1.1	15	1.0	13	0.8	12	0.8	90	1.0
TOTAL SPECIAL	521	38.8	504	35.5	505	33.7	527	33.6	534	33.5	534	33.5	3,125	34.6
TOTAL ALL SUBJECTS	1,337	99.8	1,413	100.1	1,499	99.9	1,569	100.0	1,598	100.1	1,596	100.1	9,017	100.0

TABLE 45

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGE OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS IN 1926 BY 75 CITIES HAVING A POPULATION OF 5,000 TO 10,000

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	380	28.5	346	24.5	300	20.0	215	13.9	160	10.0	144	9.0	1,545	17.2
Phonics	83	6.2	55	3.9	25	1.7	2	0.1	1	0.1	1	0.1	167	1.9
Literature	27	2.0	25	1.8	25	1.7	35	2.3	36	2.3	37	2.3	185	2.1
Arithmetic	74	5.6	140	9.9	188	12.5	207	13.4	217	13.6	219	13.7	1,045	11.6
Language and Grammar	77	5.8	100	7.1	130	8.7	151	9.7	163	10.2	164	10.3	785	8.7
Penmanship	74	5.6	80	5.7	82	5.5	83	5.4	83	5.2	82	5.1	484	5.4
Spelling	22	1.6	79	5.6	91	6.1	93	6.0	90	5.6	89	5.6	464	5.2
TOTAL THREE R'S	737	55.3	825	58.5	841	56.2	786	50.8	750	47.0	736	46.1	4,675	52.1
CONTENT SUBJECTS														
Geography	2	0.2	5	0.4	55	3.7	132	8.5	168	10.5	169	10.6	531	5.9
History	8	0.6	10	0.7	24	1.6	57	3.7	100	6.3	122	7.6	321	3.6
Social Science	1	0.1	1	0.1	1	0.1							3	0.0
Citizenship and Civics	10	0.8	11	0.8	15	1.0	16	1.0	22	1.4	23	1.4	97	1.1
Nature Study and Elem. Science	24	1.8	22	1.6	21	1.4	21	1.4	21	1.3	19	1.2	128	1.4
TOTAL CONTENT	45	3.5	49	3.6	116	7.8	226	14.6	311	19.5	333	20.8	1,080	12.0
SPECIAL SUBJECTS														
Art and Drawing	70	5.2	71	5.0	72	4.8	71	4.6	69	4.3	70	4.4	423	4.7
Music	79	5.9	79	5.6	83	5.5	89	5.7	89	5.6	86	5.4	505	5.6
Household and Manual Arts	1	0.1	1	0.1	1	0.1	1	0.1	15	0.9	25	1.6	44	0.5
Handwork	31	2.3	21	1.5	17	1.1	11	0.7	5	0.3	4	0.3	89	1.0
Projects and Activities	4	0.3	4	0.3	7	0.5	3	0.2	2	0.1	2	0.1	22	0.2
Health Education	39	2.9	37	2.6	40	2.7	44	2.8	50	3.1	50	3.1	260	2.9
Physical Training	73	5.5	71	5.0	77	5.1	79	5.1	77	4.8	79	4.9	456	5.1
Recess	118	8.9	117	8.3	113	7.5	109	7.0	104	6.5	98	6.1	659	7.3
Opening Exercises	52	3.9	53	3.7	53	3.5	48	3.1	47	2.9	45	2.8	298	3.3
Supervised Study	4	0.3	19	1.3	17	1.1	34	2.2	38	2.4	34	2.1	146	1.6
Unassigned and Free Time	60	4.5	52	3.7	42	2.8	36	2.3	30	1.9	24	1.5	244	2.7
Miscellaneous	20	1.5	14	1.0	20	1.3	13	0.8	10	0.6	10	0.6	87	1.0
TOTAL SPECIAL	551	41.3	539	38.1	542	36.0	538	34.6	536	33.4	527	32.9	3,233	35.9
TOTAL ALL SUBJECTS	1,333	100.1	1,413	100.2	1,499	100.0	1,550	100.0	1,597	99.9	1,596	99.8	8,988	100.0

TABLE 46

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGE OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS IN 1926 BY 96 CITIES HAVING A POPULATION OF 2,500 TO 5,000

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	369	27.7	331	23.1	283	18.5	206	13.0	165	10.1	143	8.7	1,497	16.4
Phonics	75	5.6	62	4.3	26	1.7	6	0.4	2	0.1	1	0.1	172	1.9
Literature	22	1.7	23	1.6	22	1.4	29	1.8	27	1.7	32	1.9	155	1.7
Arithmetic	97	7.3	148	10.3	197	12.9	206	13.0	216	13.3	217	13.2	1,081	11.8
Language and Grammar	67	5.0	89	6.2	130	8.5	151	9.5	162	10.0	170	10.3	769	8.4
Penmanship	76	5.7	84	5.9	86	5.6	86	5.4	83	5.1	82	5.0	497	5.4
Spelling	29	2.2	82	5.7	94	6.2	96	6.1	98	6.0	94	5.7	493	5.4
TOTAL THREE R'S	735	55.2	819	57.1	838	54.8	780	49.2	753	46.3	739	44.9	4,664	51.0
CONTENT SUBJECTS														
Geography	3	0.2	5	0.3	60	3.9	128	8.1	159	9.8	164	10.0	519	5.7
History	8	0.6	11	0.8	26	1.7	58	3.7	102	6.3	125	7.6	330	3.6
Social Science					1	0.1	3	0.2	5	0.3	5	0.3	14	0.2
Citizenship and Civics	12	0.9	13	0.9	17	1.1	22	1.4	26	1.6	28	1.7	118	1.3
Nature Study and Elem. Science	22	1.7	24	1.7	23	1.5	19	1.2	18	1.1	12	0.7	118	1.3
TOTAL CONTENT	45	3.4	53	3.7	127	8.3	230	14.6	310	19.1	334	20.3	1,099	12.1
SPECIAL SUBJECTS														
Art and Drawing	62	4.7	69	4.8	70	4.6	69	4.4	67	4.1	66	4.0	403	4.4
Music	72	5.4	76	5.3	76	5.0	79	5.0	78	4.8	77	4.7	458	5.0
Household and Manual Arts	1	0.1	1	0.1	1	0.1	2	0.1	7	0.4	19	1.2	31	0.3
Handwork	43	3.2	33	2.3	17	1.1	10	0.6	10	0.6	7	0.4	120	1.3
Projects and Activities	4	0.3	2	0.1	2	0.1	3	0.2	1	0.1	1	0.1	13	0.1
Health Education	35	2.6	35	2.4	43	2.8	52	3.3	62	3.8	64	3.9	291	3.2
Physical Training	69	5.2	71	5.0	75	4.9	73	4.6	72	4.4	74	4.5	434	4.7
Recess	113	8.5	116	8.1	111	7.3	104	6.6	98	6.0	89	5.4	631	6.9
Opening Exercises	48	3.6	54	3.8	52	3.4	50	3.2	46	2.8	47	2.9	297	3.3
Supervised Study	33	2.5	40	2.8	50	3.3	65	4.1	69	4.2	79	4.8	336	3.7
Unassigned and Free Time	45	3.4	37	2.6	40	2.6	42	2.6	34	2.1	33	2.0	231	2.5
Miscellaneous	28	2.1	24	1.7	25	1.6	26	1.6	19	1.2	15	0.9	137	1.5
TOTAL SPECIAL	553	41.6	558	39.0	562	36.8	575	36.3	563	34.5	571	34.8	3,382	36.9
TOTAL ALL SUBJECTS	1,333	100.2	1,430	99.8	1,527	99.9	1,585	100.1	1,626	99.9	1,644	100.0	9,145	100.0

TABLE 47

AVERAGE AMOUNTS OF TIME IN MINUTES PER WEEK AND PERCENTAGE OF TIME IN EACH GRADE ALLOTTED TO THE ELEMENTARY SUBJECTS IN 1926 BY 51 COMMUNITIES HAVING A POPULATION OF LESS THAN 2,500

Subject	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Time Grades 1–6	
	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%	Min.	%
THREE R'S														
Reading	286	21.6	260	18.4	219	14.0	175	10.7	143	8.5	121	7.1	1,204	12.9
Phonics	79	6.0	56	4.0	27	1.7	5	0.3					167	1.8
Literature	21	1.6	19	1.3	13	0.8	20	1.2	25	1.5	24	1.4	122	1.3
Arithmetic	113	8.5	155	11.0	191	12.2	203	12.4	194	11.5	193	11.4	1,049	11.2
Language and Grammar	75	5.7	100	7.1	142	9.1	142	8.7	159	9.4	163	9.6	781	8.4
Penmanship	75	5.7	72	5.1	84	5.4	85	5.2	81	4.8	75	4.4	472	5.1
Spelling	38	2.9	83	5.9	99	6.3	104	6.3	101	6.0	95	5.6	520	5.6
TOTAL THREE R'S	687	52.0	745	52.8	775	49.5	734	44.8	703	41.7	671	39.5	4,315	46.3
CONTENT SUBJECTS														
Geography	4	0.3	7	0.5	68	4.3	145	8.8	156	9.3	160	9.4	540	5.8
History	10	0.8	13	0.9	30	1.9	59	3.6	105	6.2	132	7.8	349	3.7
Social Science														
Citizenship and Civics	7	0.5	7	0.5	9	0.6	13	0.8	17	1.0	24	1.4	77	0.8
Nature Study and Elem. Science	15	1.1	18	1.3	18	1.1	15	0.9	15	0.9	18	1.1	99	1.1
TOTAL CONTENT	36	2.7	45	3.2	125	7.9	232	14.1	293	17.4	334	19.7	1,065	11.4
SPECIAL SUBJECTS														
Art and Drawing	48	3.6	47	3.3	54	3.4	45	2.7	47	2.8	45	2.6	286	3.1
Music	47	3.5	51	3.6	47	3.0	46	2.8	39	2.3	40	2.4	270	2.9
Household and Manual Arts	2	0.2	1	0.1	2	0.1	1	0.1	1	0.1	3	0.2	10	0.1
Handwork	44	3.3	30	2.1	12	0.8	7	0.4	5	0.3	5	0.3	103	1.1
Projects and Activities	9	0.7	10	0.7	10	0.6	7	0.4	7	0.4	4	0.2	47	0.5
Health Education	24	1.8	27	1.9	41	2.6	53	3.2	62	3.7	68	4.0	275	3.0
Physical Training	59	4.4	63	4.5	64	4.1	61	3.7	62	3.7	59	3.5	368	3.9
Recess	126	9.5	128	9.1	123	7.9	120	7.3	117	6.9	117	6.9	731	7.8
Opening Exercises	71	5.4	74	5.2	73	4.7	73	4.4	67	4.0	70	4.1	428	4.6
Supervised Study	52	3.9	66	4.7	79	5.0	100	6.1	115	6.8	126	7.4	538	5.8
Unassigned and Free Time	57	4.3	60	4.3	90	5.7	79	4.8	92	5.5	82	4.8	460	4.9
Miscellaneous	64	4.8	64	4.5	71	4.5	83	5.1	75	4.5	75	4.4	432	4.6
TOTAL SPECIAL	603	45.4	621	44.0	666	42.4	675	41.0	689	41.0	694	40.8	3,948	42.3
TOTAL ALL SUBJECTS	1,326	100.1	1,411	100.0	1,566	99.8	1,641	99.9	1,685	100.1	1,699	100.0	9,328	100.0

APPENDIX C

MEDIAN NUMBER OF MINUTES PER WEEK ALLOTTED TO THE ELEMENTARY SUBJECTS IN EACH HALF-GRADE BY CITIES OF EACH OF SIX POPULATION GROUPS, 1926

Considering Only Those Cities Reporting Time Allotted to the Several Subjects

TABLE 48

MEDIAN NUMBER OF MINUTES PER WEEK ALLOTTED TO THE ELEMENTARY SUBJECTS IN EACH HALF-GRADE IN 1926 BY CITIES HAVING A POPULATION OF 100,000 OR OVER

Considering Only Those Cities Reporting Time Allotted to the Several Subjects

Subject	Kgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Reading		456	455	417	417	347	343	238	238	159	159	151	151
Phonics		65	59	58	58	58	58	73	73	35	35	40	40
Literature	90	78	78	75	75	73	73	90	90	105	105	105	105
Arithmetic		103	105	145	145	213	213	220	220	222	222	219	219
Language and Grammar	110	127	127	134	134	151	152	171	171	190	190	205	205
Penmanship		78	76	75	75	76	76	77	77	74	74	73	73
Spelling		65	59	76	76	78	78	80	80	80	80	78	78
Geography		31	31	33	33	78	77	132	133	155	157	158	160
History		42	42	46	46	55	56	75	78	97	96	113	113
Social Science		50	50	55	55	100	100	225	225	300	300	300	300
Citizenship and Civics	25	45	45	30	30	50	50	50	50	53	53	53	53
Nature Study and Elem. Science	38	43	43	48	48	44	44	42	43	43	43	43	43
Art and Drawing	105	79	79	83	83	83	83	88	90	91	91	88	88
Music	123	74	73	74	74	73	73	74	74	75	75	76	76
Household and Manual Arts	100	28	28	50	50	48	48	67	67	68	68	85	85
Handwork	108	59	59	57	57	58	58	63	63	55	55	30	30
Projects and Activities	205	155	130	130	130	105	105	130	130	85	85	90	90
Health Education	53	31	31	33	33	36	36	37	37	41	41	40	40
Physical Training	120	105	105	105	105	103	103	104	104	104	104	104	104
Recess	77	125	125	126	126	123	123	107	107	102	102	80	80
Opening Exercises	56	60	59	59	59	57	57	55	55	55	55	55	55
Supervised Study		40	60	40	40	130	130	100	100	90	90	55	55
Unassigned and Free Time	73	85	85	80	80	74	73	78	78	60	53	70	73
Miscellaneous	50	90	60	40	40	50	50	60	60	35	35	37	37

TABLE 49

MEDIAN NUMBER OF MINUTES PER WEEK ALLOTTED TO THE ELEMENTARY SUBJECTS IN EACH HALF-GRADE IN 1926 BY CITIES HAVING A POPULATION OF 30,000 TO 100,000

Considering Only Those Cities Reporting Time Allotted to the Several Subjects

Subject	Kgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Reading	40	445	444	406	406	318	318	238	241	204	203	169	168
Phonics	30	77	79	73	72	56	56	52	52	40	40	28	28
Literature	76	73	73	59	60	65	65	65	63	70	70	66	68
Arithmetic	25	76	75	150	150	205	205	218	218	220	220	225	225
Language and Grammar	103	117	117	121	121	145	145	155	155	170	168	171	171
Penmanship		77	76	78	78	79	79	80	80	78	78	78	78
Spelling		60	59	78	78	102	102	102	102	101	100	88	85
Geography		44	44	53	53	74	75	141	141	156	156	159	158
History		31	33	40	43	52	54	85	85	103	105	119	119
Social Science		75	75	75	75	123	123	255	255	275	275	310	310
Citizenship and Civics	33	33	34	34	35	38	35	38	38	38	40	42	41
Nature Study and Elem. Science	55	48	51	55	51	43	43	51	47	51	51	48	49
Art and Drawing	73	79	79	84	84	93	93	92	92	91	92	88	88
Music	90	79	79	79	80	88	88	95	95	96	96	91	91
Household and Manual Arts		67	67	67	67	68	68	85	85	93	93	94	94
Handwork	175	62	67	60	57	48	48	55	55	50	50	50	50
Projects and Activities	175	50	45	85	85	38	38	35	35	28	28	25	25
Health Education	25	30	32	40	42	48	47	51	50	50	50	51	52
Physical Training	104	102	102	103	103	103	103	103	103	102	102	101	101
Recess	90	150	150	150	150	129	129	125	125	109	109	108	108
Opening Exercises	72	56	55	56	56	55	56	55	55	54	54	55	55
Supervised Study		70	70	110	70	110	110	110	110	130	140	130	140
Unassigned and Free Time	117	68	67	58	58	66	67	65	63	45	45	52	53
Miscellaneous	165	65	65	54	54	55	55	65	65	60	60	48	48

TABLE 50

MEDIAN NUMBER OF MINUTES PER WEEK ALLOTTED TO THE ELEMENTARY SUBJECTS IN EACH HALF-GRADE IN 1926 BY CITIES HAVING A POPULATION OF 10,000 TO 30,000

Considering Only Those Cities Reporting Time Allotted to the Several Subjects

Subject	Kgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Reading	110	430	420	364	365	316	313	224	227	201	200	158	158
Phonics		78	79	74	73	57	57	53	53	50	50	45	45
Literature	60	57	56	56	55	56	56	62	62	73	71	58	59
Arithmetic	48	75	75	148	149	210	211	221	223	230	229	224	224
Language and Grammar	68	104	105	113	113	134	133	157	157	178	178	202	202
Penmanship		76	76	76	76	78	78	79	79	79	79	77	77
Spelling		75	74	79	79	103	103	104	104	102	102	83	85
Geography		33	30	36	34	88	90	144	143	158	160	163	165
History	25	34	34	40	40	53	53	101	100	109	109	126	128
Social Science		65	65	85	85	115	105	225	225	255	255	258	258
Citizenship and Civics	25	32	30	36	36	36	37	37	37	35	35	37	36
Nature Study and Elem. Science	50	38	39	41	41	49	48	40	43	43	43	48	47
Art and Drawing	95	77	78	77	77	76	76	77	78	76	77	76	76
Music	102	78	78	77	77	78	78	87	87	80	80	79	79
Household and Manual Arts				90	90	80	80	70	70	91	78	85	83
Handwork	127	65	58	61	60	59	59	70	65	55	55	65	65
Projects and Activities	130	54	53	55	53	56	55	54	53	55	53	51	45
Health Education	31	40	38	40	40	44	44	50	50	54	56	55	56
Physical Training	105	100	98	101	100	102	101	102	102	103	102	102	102
Recess	74	123	122	123	124	124	124	122	122	122	122	115	121
Opening Exercises	75	56	56	57	57	57	57	57	57	57	57	56	56
Supervised Study		130	105	90	70	103	90	130	130	113	114	113	110
Unassigned and Free Time	147	90	66	68	59	63	58	57	58	65	61	51	52
Miscellaneous	90	54	53	58	54	52	53	53	58	50	53	48	50

TABLE 51

MEDIAN NUMBER OF MINUTES PER WEEK ALLOTTED TO THE ELEMENTARY SUBJECTS IN EACH HALF-GRADE IN 1926 BY CITIES HAVING A POPULATION OF 5,000 TO 10,000

Considering Only Those Cities Reporting Time Allotted to the Several Subjects

Subject	Kgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Reading	80	402	378	343	333	309	310	219	219	177	178	155	154
Phonics	25	104	102	76	75	56	55	28	28	23	23	25	25
Literature	76	55	55	57	56	56	57	66	67	73	73	80	80
Arithmetic	30	78	78	141	143	207	207	223	224	223	221	226	225
Language and Grammar	70	77	75	109	108	135	134	150	151	158	156	156	158
Penmanship	25	76	76	76	76	77	78	84	85	80	80	79	79
Spelling		57	59	78	78	79	79	100	101	88	88	90	88
Geography	10	40	20	50	40	68	67	131	131	159	148	167	168
History	10	32	28	37	35	49	48	78	78	119	118	134	133
Social Science		75	75	75	75	100	100						
Citizenship and Civics	22	30	28	29	28	30	33	38	38	42	42	44	45
Nature Study and Elem. Science	50	40	39	36	37	38	37	42	41	47	45	43	43
Art and Drawing	65	74	73	72	72	70	71	73	73	69	70	73	73
Music	103	77	77	79	78	79	79	91	91	88	89	86	86
Household and Manual Arts		60	60	60	60	60	60	60	60	84	84	86	86
Handwork	165	68	66	55	56	51	50	51	51	46	46	43	43
Projects and Activities	130	55	55	65	65	38	120	120	120	30	30	25	25
Health Education	53	52	51	51	49	53	52	53	53	57	57	60	58
Physical Training	102	78	78	77	78	79	80	95	98	90	90	101	101
Recess	76	128	128	130	130	150	150	150	148	124	124	123	123
Opening Exercises	71	59	58	57	57	57	57	57	57	55	55	55	55
Supervised Study		80	80	110	110	103	77	130	118	90	78	105	100
Unassigned and Free Time	77	90	95	78	80	73	75	80	80	66	66	65	64
Miscellaneous	78	54	48	40	40	60	61	50	52	46	46	42	42

TABLE 52

MEDIAN NUMBER OF MINUTES PER WEEK ALLOTTED TO THE ELEMENTARY SUBJECTS IN EACH HALF-GRADE IN 1926 BY CITIES HAVING A POPULATION OF 2,500 TO 5,000

Considering Only Those Cities Reporting Time Allotted to the Several Subjects

Subject	Kgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Reading	230	370	360	318	318	300	270	213	214	169	169	150	150
Phonics	73	101	78	77	78	57	57	51	52	30	30	35	35
Literature	73	60	58	56	56	56	57	61	59	57	58	57	57
Arithmetic	70	103	106	144	143	208	208	213	215	222	219	224	220
Language and Grammar	90	78	76	105	105	124	131	148	147	159	159	165	162
Penmanship	105	78	78	78	78	90	95	80	80	78	79	80	79
Spelling		59	60	79	78	103	103	103	103	104	104	103	102
Geography		28	28	37	35	70	73	131	132	157	157	161	161
History		27	29	38	39	52	61	90	94	121	119	141	137
Social Science						100	100	125	125	235	235	235	235
Citizenship and Civics	40	31	36	33	32	39	39	47	47	53	53	54	54
Nature Study and Elem. Science	52	37	36	36	36	43	43	38	37	44	42	38	38
Art and Drawing	90	75	74	73	73	72	71	69	69	68	68	68	68
Music	90	75	76	78	79	88	92	92	96	93	91	90	80
Household and Manual Arts		70	75	100	70	65	100	75	75	65	65	83	84
Handwork	155	73	74	71	73	63	65	65	65	68	68	65	65
Projects and Activities	152	55	55	37	37	38	38	38	38	38	38	45	45
Health Education	45	55	51	46	46	53	54	59	59	66	65	70	69
Physical Training	105	92	88	80	79	95	93	92	90	100	100	98	100
Recess	104	123	127	127	127	123	123	109	108	108	108	109	109
Opening Exercises	58	58	57	58	58	58	58	57	57	57	57	58	59
Supervised Study		150	180	108	112	117	117	137	135	140	120	150	155
Unassigned and Free Time	130	67	63	74	76	102	90	103	90	73	77	103	103
Miscellaneous	75	53	51	57	51	48	49	56	54	52	51	54	45

TABLE 53

MEDIAN NUMBER OF MINUTES PER WEEK ALLOTTED TO THE ELEMENTARY SUBJECTS IN EACH HALF-GRADE IN 1926 BY CITIES HAVING A POPULATION OF LESS THAN 2,500

Considering Only Those Cities Reporting Time Allotted to the Several Subjects

Subject	Kgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Reading		238	243	242	242	226	226	163	166	143	145	119	119
Phonics		75	74	59	59	54	55	35	35				
Literature	105	54	54	55	55	50	50	71	71	73	73	57	57
Arithmetic	70	111	111	149	149	201	201	218	218	204	206	206	206
Language and Grammar		72	71	95	95	145	143	142	142	156	156	157	157
Penmanship		74	74	76	76	80	79	95	95	78	77	76	76
Spelling		60	70	77	77	80	80	102	102	104	105	102	102
Geography	20	35	35	40	40	104	102	143	143	146	146	152	153
History	30	45	45	50	50	57	59	102	103	123	121	135	134
Social Science													
Citizenship and Civics	20	26	26	25	25	28	28	39	39	36	36	52	50
Nature Study and Elem. Science	20	28	28	29	29	30	30	37	37	40	40	53	53
Art and Drawing	55	60	60	57	57	59	58	61	61	64	64	57	57
Music	73	60	60	71	71	72	72	66	66	68	68	70	70
Household and Manual Arts		100	100	75	75	50	75	50	50	50	50	90	90
Handwork	75	68	68	54	54	38	38	40	40	45	45	45	45
Projects and Activities	145	75	75	70	70	65	65	60	60	68	68	65	65
Health Education	35	40	39	51	50	53	54	60	59	65	65	71	73
Physical Training	35	100	100	100	100	98	98	100	100	102	102	102	102
Recess	153	125	125	140	140	152	152	153	153	153	153	153	153
Opening Exercises	50	73	73	74	74	74	74	74	74	72	73	73	73
Supervised Study		110	113	110	105	110	103	130	117	130	140	153	153
Unassigned and Free Time	70	70	70	75	74	103	78	100	90	115	120	103	107
Miscellaneous	145	78	78	108	108	67	60	90	90	70	70	70	70

APPENDIX D

TIME ALLOTMENT TABLES FOR SOCIAL SCIENCE, OPENING EXERCISES, PROJECTS AND ACTIVITIES, RECESS, SUPERVISED STUDY, UNASSIGNED AND FREE TIME, AND MISCELLANEOUS

TABLE 54A

SOCIAL SCIENCE

Total Number of Minutes per Week Allotted to Social Science in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Social Science					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	25	0.3	20	40	1,350	325	230	875
100,000 and over ..	40	32	0.4	2	210	1,005	625		
30,000–100,000	74	64	0.7	8	200	1,350	325	233	1,025
10,000–30,000	108	29	0.3	7	40	1,025	275	137	862
5,000–10,000	75	3		1			250		
2,500–5,000	96	14	0.2	2	525	725	625		
Less than 2,500 ...	51			0					

TABLE 54B

SOCIAL SCIENCE

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Social Science in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	2	0.1	3	0.2	3	0.2	5	0.3	6	0.4	6	0.4	25	0.3
100,000 and over	40	2	0.1	3	0.2	5	0.3	6	0.4	8	0.5	8	0.5	32	0.4
30,000–100,000 ..	74	5	0.4	7	0.5	9	0.6	13	0.8	14	0.9	16	1.0	64	0.7
10,000–30,000 ...	108	3	0.2	4	0.3	3	0.2	5	0.3	7	0.4	7	0.4	29	0.3
5,000–10,000	75	1	0.1	1	0.1	1	0.1	....	.....	....	.....	....	.....	3	....
2,500–5,000	96	....	.....	....	.....	1	0.1	3	0.2	5	0.3	5	0.3	14	0.2
Less than 2,500 .	51	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	.....	....

TABLE 54C

SOCIAL SCIENCE

Number of Minutes per Week Allotted to Social Science in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum		50	50	60	60	100	100						
	Q_3													
	Median ...		45	45	50	50	100	100	225	225	300	300	300	300
	Q_1													
	Minimum .		40	40	40	40	100	100						
No. of Cities 40	No Cases .		2	2	2	2	2	2	1	1	1	1	1	1
30,000–100,000	Maximum		150	150	150	150	150	150	290	290	290	290	320	320
	Q_3				108	108	129	129						
	Median ...	50	75	75	75	75	123	123	255	255	275	275	310	310
	Q_1				63	63	103	103						
	Minimum .		50	50	55	55	75	75	160	160	200	200	250	250
No. of Cities 74	No. Cases .	1	3	3	5	5	5	5	4	4	4	4	4	4
10,000–30,000	Maximum		100	100	100	100	125	125	250	250	275	275	270	270
	Q_3		100	100	100	100								
	Median ...		65	65	85	85	115	105	225	225	255	255	258	258
	Q_1		53	53	48	48								
	Minimum .		45	45	40	40	45	45	90	90	225	225	250	250
No. of Cities 108	No. Cases .		5	5	6	6	4	3	3	3	3	3	3	3
5,000–10,000	Maximum													
	Q_3													
	Median ...		75	75	75	75	100	100						
	Q_1													
	Minimum .													
No. of Cities 75	No. Cases .		1	1	1	1	1	1						
2,500–5,000	Maximum								125	125	250	250	250	250
	Q_3													
	Median ...						100	100	125	125	225	225	225	225
	Q_1													
	Minimum .								125	125	200	200	200	200
No. of Cities 96	No. Cases .						1	1	2	2	2	2	2	2
Less than 2,500 ...	Maximum													
	Q_3													
	Median ...													
	Q_1													
	Minimum .													
No. of Cities 51	No. Cases .													

TABLE 55A

OPENING EXERCISES

Total Number of Minutes per Week Allotted to Opening Exercises in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Opening Exercises					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	300	3.3	409	45	887	333	249	435
100,000 and over	40	265	2.9	33	100	600	330	265	409
30,000–100,000	74	244	2.7	61	85	600	319	220	367
10,000–30,000	108	292	3.2	100	45	600	329	270	408
5,000–10,000	75	298	3.3	73	50	690	324	233	405
2,500–5,000	96	297	3.3	91	75	600	335	228	414
Less than 2,500	51	428	4.6	51	55	887	462	331	516

TABLE 55B

OPENING EXERCISES

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Opening Exercises in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	51	3.8	53	3.7	52	3.4	49	3.1	48	3.0	47	2.9	300	3.3
100,000 and over	40	50	3.5	49	3.3	45	2.9	41	2.6	41	2.6	39	2.6	265	2.9
30,000–100,000	74	42	3.1	43	2.9	43	2.8	40	2.5	39	2.4	37	2.3	244	2.7
10,000–30,000	108	50	3.7	49	3.5	49	3.3	49	3.1	48	3.0	47	2.9	292	3.2
5,000–10,000	75	52	3.9	53	3.7	53	3.5	48	3.1	47	2.9	45	2.8	298	3.3
2,500–5,000	96	48	3.6	54	3.8	52	3.4	50	3.2	46	2.8	47	2.9	297	3.3
Less than 2,500	51	71	5.4	74	5.2	73	4.7	73	4.4	67	4.0	70	4.1	428	4.6

TABLE 55C

OPENING EXERCISES

Number of Minutes per Week Allotted to Opening Exercises in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	125	150	150	150	150	100	100	100	100	100	100	100	100
	Q_3	74	75	75	75	75	71	71	66	66	67	67	64	64
	Median ...	56	60	59	59	59	57	57	55	55	55	55	55	55
	Q_1	51	51	51	51	51	51	51	31	31	45	45	44	44
	Minimum .	25	25	25	15	15	15	15	15	15	15	15	15	15
No. of Cities 40	No. Cases .	9	33	33	33	33	33	33	33	33	32	32	31	31
30,000–100,000	Maximum	100	100	100	100	100	100	100	100	100	150	150	150	150
	Q_3	78	70	70	72	72	69	69	59	59	59	59	63	60
	Median ...	72	56	55	56	56	55	56	55	55	54	54	55	55
	Q_1	54	50	50	51	51	50	50	44	46	29	29	50	50
	Minimum .	25	25	25	25	25	25	25	25	25	15	15	25	25
No. of Cities 74	No. Cases .	7	60	60	59	59	61	61	59	59	59	59	53	53
10,000–30,000	Maximum	150	190	190	125	150	125	125	125	125	125	125	125	125
	Q_3	108	72	72	73	73	72	72	72	72	72	72	72	72
	Median ...	75	56	56	57	57	57	57	57	57	57	57	56	56
	Q_1	53	51	51	52	52	52	52	52	52	52	52	51	51
	Minimum .	10	10	10	10	10	10	10	10	10	10	10	10	10
No. of Cities 108	No. Cases .	18	95	96	96	97	97	97	97	98	97	97	98	98
5,000–10,000	Maximum	150	130	130	130	130	130	130	125	125	125	125	150	150
	Q_3	79	74	73	72	72	73	73	72	72	69	69	60	60
	Median ...	71	59	58	57	57	57	57	57	57	55	55	55	55
	Q_1	28	52	52	52	51	51	51	40	40	46	43	50	48
	Minimum .	10	10	10	8.3	8.3	8.3	8.3	15	15	10	15	15	15
No. of Cities 75	No. Cases .	20	69	69	71	72	72	72	72	72	69	69	66	66
2,500–5,000	Maximum	150	100	100	150	150	150	150	130	130	150	150	150	125
	Q_3	123	74	73	75	75	74	74	73	73	73	73	75	75
	Median ...	58	58	57	58	58	58	58	57	57	57	57	58	59
	Q_1	53	50	50	51	51	52	52	51	51	51	51	51	51
	Minimum .	25	10	10	10	10	10	10	10	10	10	10	10	10
No. of Cities 96	No. Cases .	15	85	84	90	90	86	85	87	87	80	80	78	79
Less than 2,500 ...	Maximum	75	150	150	150	150	150	225	225	225	125	150	150	150
	Q_3		80	80	103	103	90	80	79	79	78	78	80	80
	Median ...	50	73	73	74	74	74	74	74	74	72	73	73	73
	Q_1		56	56	56	56	58	58	57	57	56	56	56	56
	Minimum .	25	25	25	10	10	10	10	25	25	10	10	25	25
No. of Cities 51	No. Cases .	4	49	49	50	50	48	49	49	49	49	49	49	49

TABLE 56A

PROJECTS AND ACTIVITIES

Total Number of Minutes per Week Allotted to Projects and Activities in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Projects and Activities					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	31	0.3	62	4	1,690	141	73	246
100,000 and over ..	40	49	0.5	4	210	700	510	350	650
30,000–100,000	74	43	0.5	10	4	1,690	100	41	187
10,000–30,000	108	28	0.3	18	30	400	130	85	241
5,000–10,000	75	22	0.2	10	30	900	83	41	175
2,500–5,000	96	13	0.1	11	12.5	255	141	46	187
Less than 2,500 ...	51	47	0.5	9	60	600	225	112	387

TABLE 56B

PROJECTS AND ACTIVITIES

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Projects and Activities in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	8	0 6	6	0.4	6	0.4	5	0.3	4	0.2	2	0.1	31	0.3
100,000 and over	40	15	1.0	12	0.8	10	0.6	6	0.4	4	0.3	2	0.1	49	0.5
30,000–100,000 ..	74	11	0.8	7	0.5	3	0.2	11	0.7	10	0.6	1	0.1	43	0.5
10,000–30,000 ...	108	7	0.5	8	0.6	5	0.3	4	0.3	2	0.2	2	0.1	28	0.3
5,000–10,000	75	4	0.3	4	0.3	7	0.5	3	0.2	2	0.1	2	0.1	22	0.2
2,500–5,000	96	4	0.3	2	0.1	2	0.1	3	0.2	1	0.1	1	0.1	13	0.1
Less than 2,500 .	51	9	0.7	10	0.7	10	0.6	7	0.4	7	0.4	4	0.2	47	0.5

TABLE 56C

PROJECTS AND ACTIVITIES

Number of Minutes per Week Allotted to Projects and Activities in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	675	325	150	150	150	150	150	150	150	90	90		
	Q_3	280												
	Median ...	205	155	130	130	130	105	105	130	130	85	85	90	90
	Q_1	155												
	Minimum .	100	90	90	60	60	60	60	100	100	75	75		
No. of Cities 40	No. Cases .	8	4	4	4	4	4	4	2	2	2	2	1	1
30,000–100,000	Maximum	375	375	375	300	300	150	150	740	740	670	670		
	Q_3	255	78	79										
	Median ...	175	50	45	85	85	38	38	35	35	28	28	25	25
	Q_1	103	28	26										
	Minimum .	50	4	4	30	30	30	30	25	25	25	25		
No. of Cities 74	No. Cases .	10	10	9	4	4	3	3	3	3	3	3	2	2
10,000–30,000	Maximum	400	100	100	100	100	100	100	100	100	60	50	50	50
	Q_3	228	78	75	73	63	73	65	58	58	59		50	50
	Median ...	130	54	53	55	53	56	55	54	53	55	53	51	45
	Q_1	75	41	38	44	39	49	48	48	40	51		38	18
	Minimum .	45	20	10	30	10	30	30	30	15	40	40	15	15
No. of Cities 108	No. Cases .	14	13	14	15	15	11	10	7	8	5	4	7	6
5,000–10,000	Maximum	225	150	150	150	150	225	225	200	200	100	100	100	100
	Q_3	159	78	78			208							
	Median ...	130	55	55	65	65	38	120	120	120	30	30	25	25
	Q_1	78	33	33			31							
	Minimum .	50	21	21	15	20	10	30	30	30	20	20	10	10
No. of Cities 75	No. Cases .	14	5	5	4	4	5	4	2	2	4	4	4	4
2,500–5,000	Maximum	505	100	100	60	60	60	60	60	60	50	50	50	50
	Q_3	226	76	76	55	55	55	55	46	46	48	48		
	Median ...	152	55	55	37	37	38	38	38	38	38	38	45	45
	Q_1	68	56	56	59	59	57	56	59	59	60	60		
	Minimum .	30	30	30	25	25	20	30	25	25	10	10	30	30
No. of Cities 96	No. Cases .	15	7	7	6	6	6	6	7	7	5	5	3	3
Less than 2,500 ...	Maximum	150	175	175	175	175	100	100	100	100	100	100	100	100
	Q_3		108	108	105	105	75	75	75	75	78	78		
	Median ...	145	75	75	70	70	65	65	60	60	68	68	65	65
	Q_1		63	63	58	58	58	58	53	53	61	61		
	Minimum .	125	50	50	50	50	50	50	40	40	50	50	50	50
No. of Cities 51	No. Cases .	2	5	5	6	6	6	6	6	6	5	5	3	3

TABLE 57A

RECESS

Total Number of Minutes per Week Allotted to Recess in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Recess					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	624	6.8	407	50	1,597	703	481	918
100,000 and over ..	40	588	6.5	36	225	1,000	675	500	825
30,000–100,000	74	576	6.3	63	75	1,350	769	473	910
10,000–30,000	108	592	6.6	95	150	1,437.5	752	492	914
5,000–10,000	75	659	7.3	73	50	1,300	756	469	924
2,500–5,000	96	631	6.9	92	150	1,200	646	471	912
Less than 2,500 ...	51	731	7.8	48	100	1,597	800	493	975

TABLE 57B

RECESS

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Recess in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	111	8.2	112	7.8	109	7.1	103	6.5	97	6.0	92	5.7	624	6.8
100,000 and over	40	107	7.5	109	7.3	105	6.8	98	6.3	88	5.6	81	5.3	588	6.5
30,000–100,000 ..	74	106	7 8	105	7.2	101	6.6	95	6.0	86	5.4	83	5.2	576	6.3
10,000–30,000 ...	108	103	7.7	104	7.3	104	6.9	98	6.2	92	5.8	91	5.7	592	6.6
5,000–10,000	75	118	8.9	117	8.3	113	7.5	109	7.0	104	6.5	98	6.1	659	7.3
2,500–5,000	96	113	8.5	116	8 1	111	7.3	104	6.6	98	6.0	89	5.4	631	6.9
Less than 2,500 .	51	126	9.5	128	9.1	123	7.9	120	7.3	117	6.9	117	6.9	731	7.8

TABLE 57C

RECESS

Number of Minutes per Week Allotted to Recess in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	150	200	200	200	200	200	200	200	200	200	200	150	150
	Q_3	103	156	155	155	155	155	155	153	153	129	129	127	127
	Median ...	77	125	125	126	126	123	123	107	107	102	102	80	80
	Q_1	74	101	98	80	80	78	78	76	76	75	75	75	74
	Minimum .	75	50	50	75	75	75	75	50	50	50	50	25	25
No. of Cities 40	No. Cases .	7	34	35	35	35	35	35	36	35	34	34	33	33
30,000–100,000	Maximum	150	225	225	225	225	225	225	225	225	225	225	225	225
	Q_3	130	157	157	157	157	156	156	155	155	154	154	153	153
	Median ...	90	150	150	150	150	129	129	125	125	109	109	108	108
	Q_1	65	80	79	106	106	101	101	77	77	78	78	78	78
	Minimum .	25	25	25	25	25	25	25	50	50	50	50	50	50
No. of Cities 74	No. Cases .	12	63	63	62	62	62	62	60	60	55	55	54	54
10,000–30,000	Maximum	175	225	300	250	250	250	250	250	250	250	250	250	250
	Q_3	106	156	155	155	155	156	156	154	154	154	154	154	154
	Median ...	74	123	122	123	124	124	124	122	122	122	122	115	121
	Q_1	56	90	91	79	80	79	79	78	79	78	79	77	77
	Minimum .	10	20	20	20	20	25	25	25	25	25	25	15	15
No. of Cities 108	No. Cases .	23	92	93	94	94	93	93	91	91	86	86	86	86
5,000–10,000	Maximum	200	250	250	250	250	200	200	200	200	200	200	200	200
	Q_3	104	157	157	156	156	156	156	156	156	155	155	155	155
	Median ...	76	128	128	130	130	150	150	150	148	124	124	123	123
	Q_1	58	95	95	101	101	88	88	81	81	78	78	75	75
	Minimum .	25	10	10	10	10	10	10	10	10	10	10	25	25
No. of Cities 75	No. Cases .	23	72	72	72	72	71	71	69	69	68	68	64	64
2,500–5,000	Maximum	225	300	300	300	300	225	225	200	200	200	200	200	200
	Q_3	152	156	156	156	156	155	155	155	154	154	154	154	154
	Median ...	104	123	127	127	127	123	123	109	108	108	108	109	109
	Q_1	71	79	101	101	101	100	100	79	78	78	79	76	76
	Minimum .	25	30	30	30	30	30	30	30	30	25	25	25	25
No. of Cities 96	No. Cases .	17	88	88	92	92	90	90	89	89	87	85	79	78
Less than 2,500 ...	Maximum	200	375	375	350	350	345	250	250	250	225	225	300	300
	Q_3	159	171	171	165	165	158	158	159	159	159	159	159	159
	Median ...	153	125	125	140	140	152	152	153	153	153	153	153	153
	Q_1	123	80	80	90	90	101	101	101	101	101	101	100	100
	Minimum .	75	50	50	50	50	50	50	25	25	25	25	25	25
No. of Cities 51	No. Cases .	5	47	47	48	48	47	47	46	46	46	46	45	45

TABLE 58A

SUPERVISED STUDY

Total Number of Minutes per Week Allotted to Supervised Study in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Supervised Study					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	218	2.4	175	20	3,480	322	144	701
100,000 and over ..	40	48	0.5	4	200	1,005	350	250	725
30,000–100,000	74	101	1.1	16	20	2,165	275	125	675
10,000–30,000	108	156	1.7	35	40	1,980	275	159	715
5,000–10,000	75	146	1.6	28	30	1,800	316	140	525
2,500–5,000	96	336	3.7	52	22.5	3,465	375	125	700
Less than 2,500 ...	51	538	5.8	40	25	3,480	350	166	825

TABLE 58B

SUPERVISED STUDY

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Supervised Study in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	18	1.3	24	1.7	31	2.0	44	2.8	49	3.0	52	3.2	218	2.4
100,000 and over	40	2	0.1	2	0.1	9	0.6	13	0.8	13	0.8	9	0.6	48	0.5
30,000–100,000 ..	74	5	0.4	10	0.7	20	1.3	22	1.4	23	1.4	21	1.3	101	1.1
10,000–30,000 ...	108	12	0.9	14	1.0	17	1.1	33	2.1	40	2.5	40	2.5	156	1.7
5,000–10,000.....	75	4	0.3	19	1.3	17	1.1	34	2.2	38	2 4	34	2.1	146	1.6
2,500–5,000	96	33	2.5	40	2.8	50	3.3	65	4.1	69	4.2	79	4.8	336	3.7
Less than 2,500 .	51	52	3.9	66	4.7	79	5.0	100	6.1	115	6.8	126	7.4	538	5.8

TABLE 58C

SUPERVISED STUDY

Number of Minutes per Week Allotted to Supervised Study in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum			70	40	40	175	175	270	270	270	270	270	270
	Q_3													
	Median ...		45	60	30	30	130	130	100	100	90	90	55	55
	Q_1													
	Minimum .			50	20	20	25	25	40	40	55	55	50	50
No. of Cities 40	No. Cases .		1	2	2	2	3	3	4	4	4	4	3	3
30,000–100,000	Maximum		150	200	265	265	425	425	425	425	450	450	450	450
	Q_3		115	155	155	153	190	190	303	303	155	155	155	160
	Median ...		70	70	110	70	110	110	110	110	130	140	130	140
	Q_1		25	25	50	48	57	57	38	38	60	60	55	60
	Minimum .		9	9	23	23	40	40	20	20	16	16	30	30
No. of Cities 74	No. Cases .		5	5	6	7	10	10	11	11	12	12	11	12
10,000–30,000	Maximum		300	300	300	300	300	300	475	475	585	585	405	405
	Q_3		260	205	260	180	145	148	280	310	270	258	240	235
	Median ...		130	105	90	70	103	90	130	130	113	114	113	110
	Q_1		70	65	50	50	54	54	75	87	70	72	67	69
	Minimum .		25	40	5	18	10	45	40	40	22	40	20	30
No. of Cities 108	No. Cases .		8	11	12	12	15	17	20	20	24	25	28	29
5,000–10,000	Maximum		150	150	200	200	250	250	435	435	450	450	450	450
	Q_3				168	155	148	148	209	205	165	225	195	210
	Median ...		80	80	110	110	103	77	130	118	90	78	105	100
	Q_1				62	62	45	45	101	93	58	58	71	68
	Minimum .		25	25	25	25	21	21	30	30	30	30	50	40
No. of Cities 75	No. Cases .		4	4	13	13	13	13	17	17	19	19	17	16
2,500–5,000	Maximum		350	360	500	550	650	650	715	690	675	750	705	715
	Q_3		312	306	260	215	215	213	212	218	250	210	255	303
	Median ...		150	180	108	112	117	117	137	135	140	120	150	155
	Q_1		102	103	60	63	77	102	104	103	90	88	108	114
	Minimum .		20	20	25	25	25	45	45	25	25	25	40	40
No. of Cities 96	No. Cases .		17	18	24	25	26	27	33	33	34	34	37	35
Less than 2,500 ...	Maximum		400	400	425	425	725	725	900	900	900	900	900	900
	Q_3		183	185	180	180	255	218	318	318	314	313	313	313
	Median ...		110	113	110	105	110	103	130	117	130	140	153	153
	Q_1		55	59	56	53	69	68	63	53	85	75	110	110
	Minimum .		45	45	15	30	30	30	15	15	30	30	75	30
No. of Cities 51	No. Cases .		19	19	24	24	25	25	21	21	25	24	26	26

TABLE 59A

UNASSIGNED AND FREE TIME

Total Number of Minutes per Week Allotted to Unassigned and Free Time in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Unassigned and Free Time					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	243	2.7	266	7.5	5,225	216	94	477
100,000 and over ..	40	222	2.4	21	10	1,427.5	325	171	494
30,000–100,000	74	217	2.4	46	10	2,932.5	225	96	487
10,000–30,000	108	169	1.9	59	7.5	2,125	168	76	415
5,000–10,000	75	244	2.7	51	10	1,895	231	107	486
2,500–5,000	96	231	2.5	56	25	2,937.5	150	61	475
Less than 2,500 ...	51	460	4.9	33	16	5,225	262	165	687

TABLE 59B

UNASSIGNED AND FREE TIME

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Unassigned and Free Time in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	49	3.6	43	3.0	42	2.7	39	2.5	37	2.3	33	2.0	243	2.7
100,000 and over	40	52	3.7	45	3.0	38	2.5	36	2.3	30	1.9	21	1.4	222	2.4
30,000–100,000 ..	74	44	3.2	36	2.5	37	2.4	36	2.3	32	2.0	32	2.0	217	2.4
10,000–30,000 ...	108	42	3.1	31	2.2	27	1.8	25	1.6	23	1.4	21	1.3	169	1.9
5,000–10,000	75	60	4.5	52	3.7	42	2.8	36	2.3	30	1.9	24	1.5	244	2.7
2,500–5,000	96	45	3.4	37	2.6	40	2.6	42	2.6	34	2.1	33	2.0	231	2.5
Less than 2,500 .	51	57	4.3	60	4.3	90	5.7	79	4.8	92	5.5	82	4.8	460	4.9

TABLE 59C

UNASSIGNED AND FREE TIME

Number of Minutes per Week Allotted to Unassigned and Free Time in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over	Maximum	225	275	425	342.5	342.5	292.5	292.5	270	270	300	300	177.5	187.5
	Q_3	79	149	138	110	110	112	112	113	113	110	90	123	125
	Median	73	85	85	80	80	74	73	78	78	60	53	70	73
	Q_1	66	63	55	60	60	35	35	58	58	37	33	38	50
	Minimum	60	35	35	30	30	10	10	10	10	10	10	25	25
No. of Cities 40	No. Cases	5	19	17	16	16	17	17	15	15	14	14	11	10
30,000–100,000	Maximum	300	500	275	248	248	585	560	475	600	600	600	475	475
	Q	153	148	125	115	125	123	128	125	128	110	113	102	102
	Median	117	68	67	58	58	66	67	65	63	45	45	52	53
	Q_1	58	41	42	40	41	43	43	35	34	26	27	29	31
	Minimum	50	11	10	7	7	5	5	5	5	5	10	10	10
No. of Cities 74	No. Cases	11	34	35	28	30	31	31	30	29	30	30	31	31
10,000–30,000	Maximum	250	475	375	370	370	420	420	400	400	350	350	350	350
	Q_3	210	145	128	106	91	92	91	92	93	95	93	85	83
	Median	147	90	66	68	59	63	58	57	58	65	61	51	52
	Q_1	90	51	43	41	34	35	31	41	40	46	42	33	34
	Minimum	50	15	15	15	10	10	10	20	5	20	5	10	10
No. of Cities 108	No. Cases	12	42	41	37	39	36	37	33	32	30	31	32	31
5,000–10,000	Maximum	300	485	440	415	415	415	415	275	275	305	305	305	305
	Q_3	116	160	175	161	161	142	143	116	116	112	112	79	77
	Median	77	90	95	78	80	73	75	80	80	66	66	65	64
	Q_1	60	49	46	43	45	37	34	35	35	38	38	48	48
	Minimum	21	16	16	10	10	10	10	5	5	5	5	15	15
No. of Cities 75	No. Cases	20	40	37	35	34	31	30	30	30	25	25	22	22
2,500–5,000	Maximum	300	500	500	425	515	545	605	625	625	500	500	500	525
	Q_3	138	138	125	150	135	142	148	178	170	195	195	208	208
	Median	130	67	63	74	76	102	90	103	90	73	77	103	103
	Q_1	73	43	41	43	48	45	47	55	48	48	48	46	51
	Minimum	50	25	15	15	20	10	5	15	15	25	20	5	5
No. of Cities 96	No. Cases	17	38	35	30	29	31	31	25	26	25	25	21	21
Less than 2,500	Maximum	250	400	400	675	675	1125	1125	1100	1100	1075	1075	1095	1095
	Q_3	115	138	128	155	155	205	158	170	170	185	190	625	400
	Median	70	70	70	75	74	103	78	100	90	115	120	103	107
	Q_1	25	46	46	61	55	59	57	57	53	68	65	52	50
	Minimum	15	10	10	10	10	16	16	45	25	25	25	25	25
No. of Cities 51	No. Cases	5	25	25	22	22	23	21	20	20	19	18	18	16

TABLE 60A

MISCELLANEOUS

Total Number of Minutes per Week Allotted to Miscellaneous in Grades 1–6 in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Av. Min. per Week for All Cities in Group	Per Cent of Total Time	For Cities Which Report Time Allotted to Miscellaneous					
				No. of Cities Which Report Subject	Range		Median No. of Minutes per Week	Range of Middle 50 Per Cent	
					Min.	Max.		Q_1	Q_3
All Cities	444	150	1.6	231	7.5	3,680	176	94	324
100,000 and over ..	40	102	1.1	15	40	900	191	119	262
30,000–100,000	74	152	1.7	35	25	1,650	231	97	456
10,000–30,000	108	90	1.0	51	7.5	875	158	89	278
5,000–10,000	75	87	1.0	36	25	710	116	71	237
2,500–5,000	96	137	1.5	56	25	1,480	169	113	300
Less than 2,500 ...	51	432	4.6	38	20	3,680	225	125	625

TABLE 60B

MISCELLANEOUS

Average Number of Minutes per Week by Grades, Percentage of Time in Each Grade, and Percentage of Total Time in Grades 1–6 Allotted to Miscellaneous in 444 School Systems

BY POPULATION GROUPS

Population Group	No. of Cities	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Total Grades 1–6	
		Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent	Av.	Per Cent
All Cities	444	29	2.2	25	1.7	26	1.7	26	1.6	22	1.4	22	1.4	150	1.6
100,000 and over	40	27	1.9	19	1.3	14	0.9	15	1.0	14	0.9	13	0.9	102	1.1
30,000–100,000 ..	74	32	2.4	30	2.0	24	1.6	21	1.3	21	1.3	24	1.5	152	1.7
10,000–30,000 ...	108	19	1.4	15	1.1	16	1.1	15	1.0	13	0.8	12	0 8	90	1.0
5,000–10,000	75	20	1.5	14	1.0	20	1.3	13	0.8	10	0.6	10	0.6	87	1.0
2,500–5,000	96	28	2.1	24	1.7	25	1.6	26	1.6	19	1.2	15	0.9	137	1.5
Less than 2,500 .	51	64	4.8	64	4.5	71	4.5	83	5.1	75	4.5	75	4.4	432	4.6

TABLE 60C

MISCELLANEOUS

Number of Minutes per Week Allotted to Miscellaneous in Each Half-Grade by Those Cities Which Report Definite Time Assignments for the Subject

BY POPULATION GROUPS

Population Group		Kdgn.	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
			L	H	L	H	L	H	L	H	L	H	L	H
100,000 and over ..	Maximum	75	200	200	170	170	150	150	150	150	150	150	150	150
	Q_3	68	153	150	90	90	95	95	120	120	110	110	95	95
	Median ...	50	90	60	40	40	50	50	60	60	35	35	37	37
	Q_1	33	35	35	30	30	31	31	40	40	23	23	22	22
	Minimum .	25	20	20	20	20	20	20	20	20	10	10	10	10
No. of Cities 40	No. Cases .	5	12	12	12	12	9	9	8	8	10	10	9	9
30,000–100,000	Maximum	250	330	330	350	350	300	300	275	275	275	275	350	350
	Q_3	205	149	145	115	118	103	78	103	103	78	78	73	73
	Median ...	165	65	65	54	54	55	55	65	65	60	60	48	48
	Q_1	55	38	38	41	41	31	31	36	36	38	38	33	33
	Minimum .	25	23	23	10	10	15	15	20	20	13	13	20	20
No. of Cities 74	No. Cases .	7	25	25	25	25	23	23	19	19	18	18	20	20
10,000–30,000	Maximum	350	330	240	245	245	210	210	150	150	150	150	150	150
	Q_3	255	74	75	86	87	72	74	93	98	77	78	73	72
	Median ...	90	54	53	58	54	52	53	53	58	50	53	48	50
	Q_1	63	38	34	34	34	33	33	31	32	31	31	28	28
	Minimum .	15	15	4	10	10	10	10	5	5	10	10	10	10
No. of Cities 108	No. Cases .	9	32	31	27	28	27	28	27	25	27	27	27	26
5,000–10,000	Maximum	250	425	425	150	150	205	205	140	140	125	125	125	125
	Q_3	135	79	69	69	71	77	76	71	73	59	59	56	56
	Median ...	78	54	48	40	40	60	61	50	52	46	46	42	42
	Q_1	61	33	29	28	28	40	41	29	33	23	23	23	23
	Minimum .	25	15	15	15	15	15	15	15	15	10	10	5	5
No. of Cities 75	No. Cases .	13	21	21	20	20	20	21	19	18	18	18	17	17
2,500–5,000	Maximum	420	290	290	145	145	400	400	525	450	180	180	180	180
	Q_3	175	100	105	79	76	80	100	104	101	80	76	79	75
	Median ...	75	53	51	57	51	48	49	56	54	52	51	54	45
	Q_1	64	36	34	34	33	31	31	35	36	32	34	33	30
	Minimum .	35	15	15	20	20	10	10	10	10	10	20	15	15
No. of Cities 96	No. Cases .	13	36	34	38	37	36	32	33	35	28	28	25	24
Less than 2,500 ...	Maximum	200	555	555	480	480	725	725	780	780	780	780	650	650
	Q_3	158	175	175	213	213	150	150	200	200	138	138	430	430
	Median ...	145	78	78	108	108	67	60	90	90	70	70	70	70
	Q_1	45	43	43	48	48	38	32	44	44	37	37	46	46
	Minimum .	15	10	10	10	10	10	10	10	10	15	15	10	10
No. of Cities 51	No. Cases .	5	25	25	23	23	26	26	24	24	21	21	18	18

APPENDIX E

LIST OF 444 CITIES, BY POPULATION GROUPS

LIST OF 444 CITIES WHOSE TIME ALLOTMENT SCHEDULES HAVE BEEN USED IN THIS INVESTIGATION, ARRANGED BY POPULATION GROUPS ACCORDING TO CENSUS FOR 1920

100,000 or over

Baltimore, Md.
Birmingham, Ala.
Boston, Mass.
Bridgeport, Conn.
Buffalo, N. Y.
Cambridge, Mass.
Cleveland, Ohio
Columbus, Ohio
Dayton, Ohio
Denver, Colo.
Des Moines, Iowa
Detroit, Mich.
Indianapolis, Ind.
Jersey City, N. J.
Kansas City, Kan.
Kansas City, Mo.
Los Angeles, Calif.
Milwaukee, Wis.
Minneapolis, Minn.
Nashville, Tenn.
Newark, N. J.
New Bedford, Mass.
New Orleans, La.
Norfolk, Va.
Oakland, Calif.
Paterson, N. J.
Philadelphia, Pa.
Pittsburgh, Pa.
Providence, R. I.
Reading, Pa.
Richmond, Va.
Scranton, Pa.
Seattle, Wash.
Syracuse, N. Y.
Toledo, Ohio
Trenton, N. J.
Washington, D. C.
Worcester, Mass.
Yonkers, N. Y.
Youngstown, Ohio

30,000–100,000

Amsterdam, N. Y.
Atlantic City, N. J.
Aurora, Ill.
Bayonne, N. J.
Berkeley, Calif.
Bethlehem, Pa.
Canton, Ohio
Charleston, S. C.
Chelsea, Mass.
Chester, Pa.
Cicero, Ill.
Colorado Springs, Colo.
Columbus, Ga.
Davenport, Ia.
Decatur, Ill.
Dubuque, Iowa
East Chicago, Ind.
East Orange, N. J.
Everett, Mass.
Flint, Mich.
Fort Wayne, Ind.
Fresno City, Calif.
Green Bay, Wis.
Haverhill, Mass.
Hazleton, Pa.
Jackson, Mich.
Joliet, Ill.
Kalamazoo, Mich.
Kenosha, Wis.
Kokomo, Ind.

La Crosse, Wis.
Lakewood, Ohio
Lancaster, Pa.
Lima, Ohio
Lincoln, Nebr.
Long Beach, Calif.
Lynn, Mass.
Madison, Wis.
Malden, Mass.
Moline, Ill.
Mount Vernon, N. Y.
Muskogee, Okla.
New Brunswick, N. J.
Newburgh, N. Y.
Newton, Mass.
Niagara Falls, N. Y.
Norristown, Pa.
Oak Park, Ill.
Oklahoma City, Okla.
Orange, N. J.
Oshkosh, Wis.
Pasadena, Calif.
Passaic, N. J.
Peoria, Ill.
Perth Amboy, N. J.
Portland, Maine
Poughkeepsie, N. Y.
Racine, Wis.
Roanoke, Va.
Rockford, Ill.
Rock Island, Ill.
Saginaw, Mich.
San Diego, Calif.
Schenectady, N. Y.
Somerville, Mass.
Springfield, Mo.
Springfield, Ohio.
Terre Haute, Ind.
Utica, N. Y.
West Hoboken, N. J.
Wheeling, W. Va.
Winston-Salem, N. C.
Woonsocket, R. I.
York, Pa.

10,000-30,000

Aberdeen, S. Dak.
Alhambra, Calif.
Alton, Ill.
Ann Arbor, Mich.
Asbury Park, N. J.
Bartlesville, Okla.
Batavia, N. Y.
Belleville, N. J.
Belmont, Mass.
Beloit, Wis.
Beverley, Mass.
Bloomfield, N. J.
Blue Island, Ill.
Boone, Iowa
Brattleboro, Vt.
(including
Brattleboro Village)
Cairo, Ill.
Cambridge, Ohio
Carrick, Pa.
Carthage, Mo.
Centralia, Ill.
Champaign, Ill.
Cheyenne, Wyo.
Cleveland Heights, Ohio
Donora, Pa.
Eau Claire, Wis.
Enfield, Conn.
Enid, Okla.
Fairfield, Conn.
Freeport, Ill.
Fremont, Ohio
Gadsden, Ala.
Galesburg, Ill.
Garfield, N. J.
Goldsboro, N. C.
Grand Island, Nebr.
Greenwich, Conn.
(including
Greenwich Borough)
Hackensack, N. J.
Homestead, Pa.
Hoquiam, Wash.
Ilion, N. Y.
Ironwood, Mich.
Irvington, N. J.
Ithaca, N. Y.
Jacksonville, Ill.

Joplin, Mo.
Kearny, N. J.
Kingston, N. Y.
Lawrence, Kan.
Leavenworth, Kan.
Lockport, N. Y.
Mamaroneck, N. Y.
(including
Mamaroneck Village)
Manitowoc, Wis.
Marinette, Wis.
Marquette, Mich.
Marshalltown, Iowa
Mason City, Iowa
Meridian, Miss.
Methuen, Mass.
Middletown, N. Y.
Milford, Conn.
Mishawaka, Ind.
Missoula, Mont.
Monessen, Pa.
Morgantown, W. Va.
Newburyport, Mass.
New London, Conn.
Niles City, Ohio
North Bergen Twp., N. J.
North Braddock, Pa.
Northbridge, Mass.
North Tonawanda, N. Y.
Norwood, Mass.
Nutley, N. J.
Okmulgee, Okla.
Olyphant, Pa.
Oneida, N. Y.
Ottumwa, Iowa
Paducah, Ky.
Phillipsburg, N. J.
Pine Bluff, Ark.
Plainfield, N. J.
Pomona, Calif.
Port Jervis, N. Y.
Richmond, Calif.
Riverside, Calif.
Rome, Ga.
St. Cloud, Minn.
Salem, Ohio
Salina, Kan.
San Bernardino, Calif.
Santa Ana, Calif.
Santa Barbara, Calif.
South Orange and
Maplewood, N. J.
Stevens Point, Wis.
Summit, N. J.
Traverse, Mich.
Trinidad, Colo.
Tucson, Ariz.
Wallingford, Conn.
(including
Wallingford Borough)
Warren, Ohio
Waterloo, Iowa
(West Independent
School District)
Wausau, Wis.
West Allis, Wis.
West New York, N. J.
West Orange, N. J.
White Plains, N. Y.
Winthrop, Mass.
Yakima, Wash.

5,000-10,000

Agawan, Mass.
Americus, Ga.
Antigo, Wis.
Bellevue, Pa.
Bennington, Vt.
Blairsville, Pa.
Brawley, Calif.
Brazil, Ind.
Burbank District, Calif.
Calexico, Calif.
Cedar Falls, Iowa
Cheektowaga District, N. Y.
Claremont, N. H.
Cliffside, N. J.
Columbus, Nebr.
Concord, Mass.
Coraopolis, Pa.
Crosby District, Minn.
Darby, Pa.
Eveleth, Minn.

Fort Thomas, Ky.
Gallipolis, Ohio
Gilbert, Minn. (District 18)
Hampton, Va.
Hastings, Mich.
Hastings-on-Hudson, N. Y.
Hempstead, N. Y.
Hudson Falls, N. Y.
Kent, Ohio
Lead, S. Dak.
Logan, Ohio
Macomb, Ill.
Manhattan, Kan.
Manistee, Mich.
Marblehead, Mass.
Marshall, Mo.
Mitchell, S. Dak.
Monmouth, Ill.
Monrovia, Calif.
Montague, Mass.
Montpelier, Vt.
Munising, Mich.
Neenah, Wis.
New Milford, Conn.
Niles, Mich.
Norfolk, Nebr.
Northampton, Pa.
North Andover, Mass.
Ottawa, Kan.
Palmer, Mass.
Pratt, Kan.
Prescott, Ariz.
Princeton, N. J.
Rochester, N. H.
Rockville Center, N. Y.
Roselle, N. J.
Roselle Park, N. J.
Rutherford, N. J.
Rye, N. Y.
St. Charles, Mo.
San Mateo, Calif.
Sheffield, Ala.
Shenandoah, Iowa
Solvay, N. Y.
So. St. Paul, Minn.
Stoneham, Mass.
Swampscott, Mass.
Tarboro, N. C.
Tyrone, Pa.
Walden, N. Y.
Walpole, Mass.
Wapakoneta, Ohio
Wellesley, Mass.
Winfield, Kan.
Woodbury, N. J.

2,500-5,000

Ashland, Oregon
Augusta, Kan.
Aurora, Minn.
Bellefonte, Pa.
Bethel, Conn.
Birmingham, Mich.
Burlingame, Calif.
Caldwell, N. J.
Cape May, N. J.
Carroll, Iowa
Clarion, Pa.
Clayton, Mo.
Cooperstown, N. Y.
Coplay, Pa.
Danielson, Conn.
Dillon, Mont.
East Aurora, N. Y.
Elizabeth, Pa.
Elkton, Md.
Falmouth, Mass.
Ferndale Dist., Mich.
Flemington, N. J.
Florence, Colo.
Follansbee, W. Va.
Fort Morgan, Colo.
Frankfort, N. Y.
Franklin, N. J.
Fredericktown, Mo.
Geneva, Ohio
Glendale, Ariz.
Grants Pass, Oregon
Granville, N. Y.
Greenfield, Ohio
Green Island, N. Y.
Haledon, N. J.
Hamburg, Pa.

Hamlet, N. C.
Harvard, Mass.
Hayward, Calif.
Hiawatha, Kan.
Highland, Ill.
Holden, Mass.
Hudson, Wis.
Irvington, N. Y.
Jacksonville, Tex.
Jefferson, Wis.
Jerome, Ariz.
Kutztown, Pa.
Lansdowne, Pa.
Lawrence, N. Y.
Leadville, Colo.
Le Mars, Iowa
Lindsay, Calif.
Litchfield (town), Conn.
Lodi, Calif.
Macon, Mo.
Madera, Calif.
Mauch Chunk, Pa.
Memphis, Texas
Merchantville, N. J.
Morris, Ill.
Morrisville, Pa.
Moscow, Idaho
New Lexington, Ohio
North Vernon, Ind.
Paola, Kan.
Patchogue, N. Y.
Penn Yan, N. Y.
Pierre, S. Dak.
Plymouth, Wis.
Portage, Pa.
Princeton, Ill.
Quincy, Fla.
Rochester, Mich.
Rockport, Mass.
Royersford, Pa.
Salem, W. Va.
Salinas, Calif.
Sandpoint, Idaho
Sedro-Woolley, Wash.
Selma, Calif.
South Brownsville, Pa.
So. San Francisco, Calif.
Spring City, Pa.
Storm Lake, Iowa
Suffern, N. Y.
Thief River Falls, Minn.
Tooele, Utah
Valley City, N. Dak.
Venice, Ill.
Verona, N. J.
Walton, N. Y.
Waterloo, N. Y.
Waupun, Wis.
Westford, Mass.
West Point, Miss.

Less than 2,500

Ashmore, Ill.
Bay Point, Calif.
Belle Anne District, Ark.
Blue Point, N. Y.
Boyd, Minn.
Brandville, Ohio
Brewster, Mass.
Calistoga Joint Union District, Calif.
Canton, Texas
Carpinteria, Calif.
Cecilton, Md.
Colebrook Special District, N. H.
East Quogue, N. Y.
Elkton, S. Dak.
Froid, Mont.
Galva, Kan.
Grand Island Twp. Union District, Calif
Greenwich, N. J.
Hertford, N. C.
Highland Springs, Va.
Imperial, Nebr.
Ione, Wash.
Isle of Wight Consolidated District, Va.
Johnson, Vt.
Kanopolis, Kan.
Kennedy, N. Y.
Lancaster, Calif.
Mayville, N. Y.
Mission Hill, S. Dak.

Mount Pleasant Consolidated District, Va.
New Egypt, N. J.
New Market, Ind.
Norwood, N. Y.
Orient, N. Y.
Pinole-Hercules District, Calif.
Portage Twp., Mich.
Ridgeville, Ind.
Roy, Wash.
Springfield Twp. Consolidated District, Pa.
Stryker, Ohio
Sutherlin, Oregon
Terryville, Conn.
Thornton, N. H.
Vergennes, Vt.
Washburn, N. Dak.
Washingtonville, Ohio
West Milton, Ohio
West Tisbury, Mass.
White Plains, N. C.
Windsor Consolidated District, Virginia
Yerrington, Nev.